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BETTER FRUIT

VOLUME IX

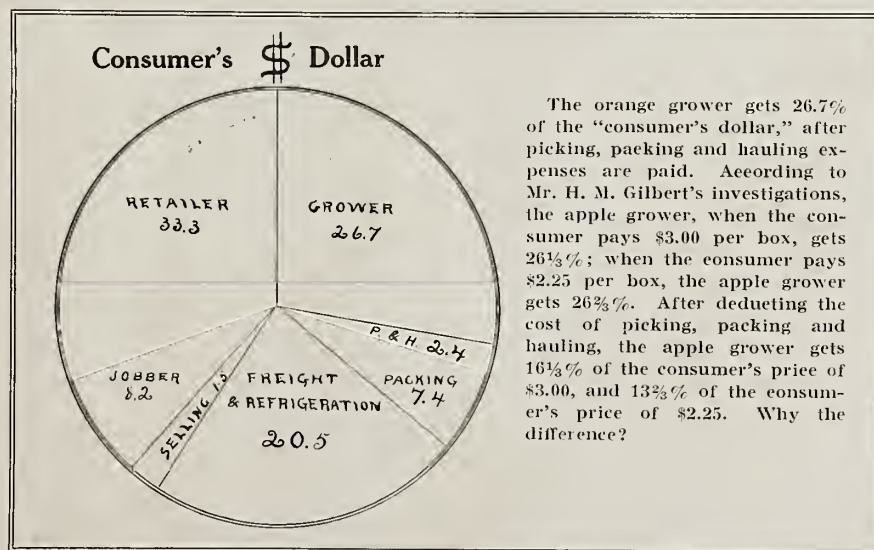
MAY, 1915

NUMBER 11

THIS EDITION contains personal sketches of the lives, with illustrations, of most of the Sales Managers of the largest fruit shipping concerns operating in the Northwest. The feature article is on the cost of distribution of the Citrus Fruit Crop, showing the percentage the grower gets of the "Consumer's Dollar"—the ablest article ever written on the subject, by Mr. G. Harold Powell, Manager of the California Fruit Growers' Exchange, whose picture appears below.



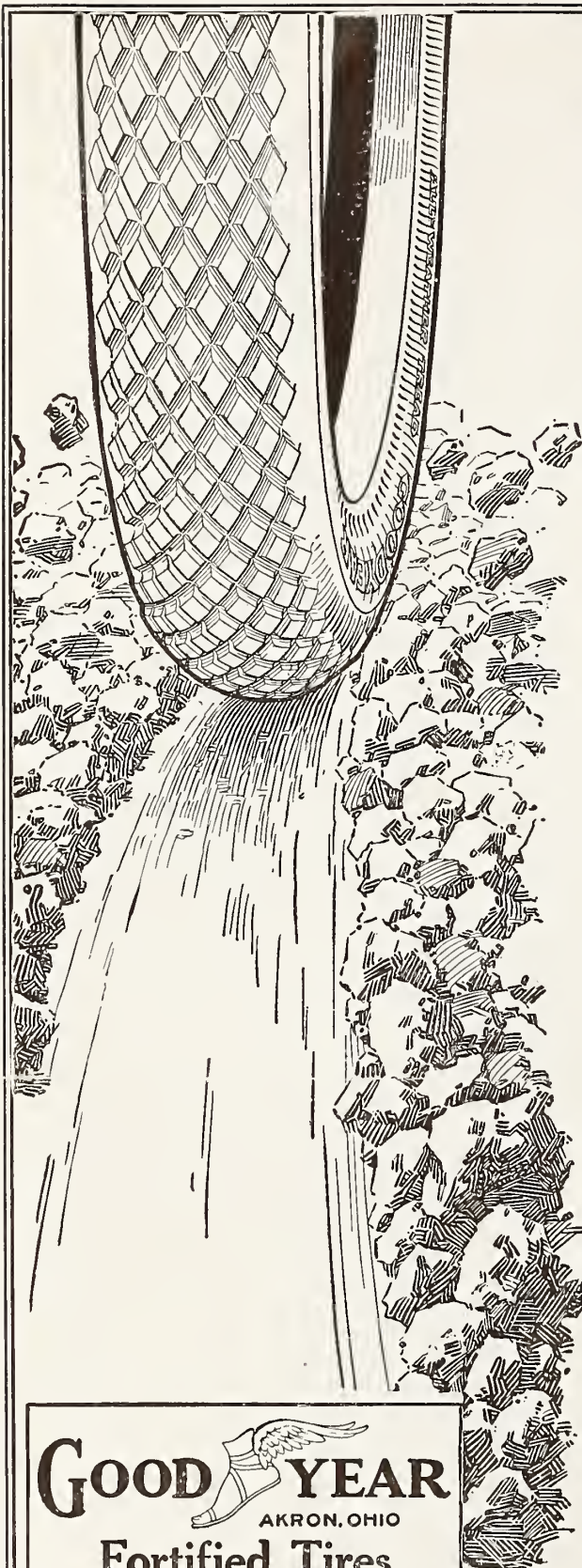
G. HAROLD POWELL
Manager California Fruit Growers' Exchange
Los Angeles, California



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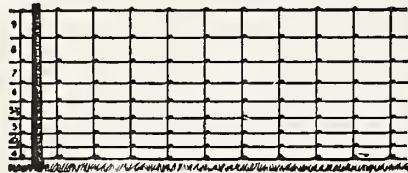
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BETTER FRUIT

AN ILLUSTRATED MAGAZINE PUBLISHED MONTHLY IN THE INTEREST OF MODERN, PROGRESSIVE FRUIT GROWING AND MARKETING

The Cost of Distributing the California Citrus Fruit Crop

By G. Harold Powell, General Manager California Fruit Growers' Exchange, Los Angeles, California

THERE are approximately two hundred thousand acres of citrus fruits in California, representing an investment of \$200,000,000. Eighty-three per cent of the total acreage in 1913 were oranges and seventeen per cent were lemons. Two-thirds of the groves were of bearing age in 1913; 85 per cent of these were oranges and 15 per cent were lemons. There are now 32,556 acres of lemons in California, 14,500 of which are non-bearing age. When the non-bearing lemon groves come into bearing, the lemon production of the state, even with a moderate yield, will exceed the present total lemon consumption of the United States and Canada.

There has been a steady increase in the acreage devoted to citrus culture in California since the introduction of the Washington navel orange in 1873. In the ten years from 1903 to 1913, the citrus area increased from 83,657 acres to 191,357 acres, an increase of 128.9 per cent; oranges increased 138 per cent and lemons 82 per cent during this period. In the five years from 1908 to 1913, the total area increased 29.1 per cent, the increase for oranges and lemons being 23.3 and 67.6 per cent respectively.

The shipment of citrus fruits has also increased rapidly. The increase in five-year periods in the number of carloads of oranges and lemons is as follows: From 1895 to 1900, 225 per cent; 1900 to 1905, 71.5 per cent; 1905 to 1910, 10.9 per cent, and 48.5 per cent from 1910 to 1914. A normal crop now is 50,000 carloads, one-seventh of which are lemons. Of the oranges, approximately 63 per cent are Washington navels, 27 per cent Valencias and 10 per cent miscellaneous varieties. The Valencia shipments increased 60 per cent in 1914 and will increase rapidly in the near future.

There has always existed a fear since the beginning of the California citrus industry lest the increase in production might outrun the increase in consumption; or, to state it differently, that there might be more citrus fruits produced than the people could consume at a price that would pay the producer. The total consumption of citrus fruits is increased in two ways: first, through the increase in population, and second, in the increase in the per capita consumption. The increase in population is not rapid enough to absorb the increase in the production of citrus fruits. The population of the United States increased 20.7 per cent from 1890 to 1900; the shipments of citrus fruits

increased 195 per cent during the same period. From 1900 to 1910 the population increased 21 per cent, while the shipments increased 292 per cent during the same period. The consumer is using more fruit than in former years, and is using it more and more as an article of food rather than a luxury. It is through the increase in the fruit-eating habit of the people that the enormous increase in fruit production is taken care of.

In order to stimulate consumption and to insure a fair return on the investment, the industry has been obliged to eliminate speculative distribution by placing its own agents in the different markets of the United States and Can-

solved by scientific research. Through better handling methods the industry has lessened decay and has thereby reduced the risk of the jobber and retailer.

There are few American industries that have been benefitted more by the application of systematic, organized business methods to its problems than the California citrus industry. Until recently, its investigations ceased with the production of the fruit and with its distribution to the jobbers of the country. But as the prosperity of the industry always waits upon the increase in consumption of the fruit at prices profitable to the producer, the industry has undertaken an investigation of the distribution after the fruit reaches the market in order to see how the handling of its own problems can be improved and how its co-operation with the jobbers, the retailer and the consumer can be made more effective, its advertising more direct, and the wastes of distribution eliminated. The distribution of the nation's food supplies is far more complex than the problems of production, because of the intricate, interwoven relationships of transportation, finance, the assembling and distribution to the consumers after a product reaches the market. The standard of living of the American consumer has changed radically in the last generation and the demands of the consumer impose a series of conditions upon the distributing agencies that are increasing in complexity.

The investigation of the distribution of the citrus fruit crop has been made in the principal cities of the United States and Canada through the co-operation of the jobbers and retailers with agents of the industry located in these places. It has not yet been extended to the rural districts. The method of investigation, so far as it relates to the costs, follows: Beginning in January, 1914, the agents, starting with the delivered price of oranges, to the jobbers, of the 126, 150, 176 sizes, and of the 300 and 360 sizes of lemons, determined the price which the leading jobbers in each place charged the retailers on the same grades and sizes, and then determined the retail price to the consumer, both on the box and dozen basis. The data were accumulated every two weeks on the same grades and sizes during the entire year, thereby giving a large number of consistent reports from many places. To illustrate the results of the investigation, thirty representative cities and towns were selected. There are 5,485 reports on oranges from jobbers and

Features of this Issue

COST OF DISTRIBUTING CALIFORNIA CITRUS CROP

REPORT OF NORTHWESTERN FRUIT EXCHANGE

SALES MANAGERS OF NORTHWEST FRUIT SHIPPING CONCERNS

NORTH PACIFIC FRUIT DISTRIBUTORS BY-LAWS

INTER-CROPPING ORCHARDS

ORCHARD COSTS

OUTLOOK FOR PRUNES

ada, through whom the grower sells the fruit to the jobber after the latter determines its condition, or sells it to him subject to condition on arrival. In some markets the fruit is sold on an f.o.b. California basis. The industry is creating a public consciousness of the food value of citrus fruits by advertising on a national scale; it is stimulating the sale by co-operating with the retail dealers and with the jobbers and traveling salesmen by furnishing them with display and advertising material and information on the citrus industry.

The industry has also made a searching investigation of the cultural and labor costs of production, in order that it may better understand its problems; it has organized on a co-operative basis, the purchase of materials used in the packing houses and in the groves, and it has secured the aid of the state and federal governments in order that its business may be conducted economically, and cultural and fruit handling difficulties that confront it may be

retailers. By taking the average price paid by the consumer, it is possible to make a distribution of the consumer's dollar back to the grower and to show the different factors which enter into the consumer's price. Taking the thirty representative markets as a whole, including the 5,485 reports extending over the year 1914, the factors entering into the consumer's dollar are as follows:

Retail distributing cost (gross).....	33.3%
Jobber's distributing cost (gross).....	8.2%
Grower's selling cost	1.5%
Freight and refrigeration	20.5%
Packing house cost	7.4%
Picking and hauling to packing house..	2.4%
Proportion returned for fruit on the tree	26.7%

Consumer's Dollar represents.....100 %

Summarized, the data shows that 36.5 per cent of the consumer's dollar is returned to the grower in California, of which 9.8 per cent represents the proportion allotted to picking, hauling and packing; 20.5 per cent represents the allotment to transportation; 1.5 per cent the grower's cost of selling the jobber, and 41.5 per cent the proportion represented by the jobbing and retail gross distributing costs, the latter representing four times as much as the former. The amount of the consumer's dollar allotted to each factor referred to in the table should not be confused with the cost of handling each of these items. The average cost of picking and hauling a packed box of oranges from the grove to the packing house is 10.5 cents; the average cost of packing and loading on the cars is 32.4 cents per box; the average cost of freight and refrigeration is 90.7 cents per box; the average grower's cost of the co-operative method of selling, including advertising, is 6.6 cents per box; the average mark-up of the jobber is 14.2 per cent on the purchase price; the average mark-up of the retailer is 49.8 per cent on his purchase price, both of the latter figures including the loss from decayed fruit.

A considerable variation has been found in the proportion of the consumer's dollar that goes to the jobber and retailer in different parts of the country. West of the Rockies and in Canada, for example, the jobbers' costs are higher than in the East or in the Mississippi Valley, on account of higher labor costs, higher rents, higher interest and greater geographical distances to be covered by the traveling salesmen of the jobbers. These costs are reduced in the older, more densely populated parts of the country, where interest rates are lower and where the various costs of distribution are more economically accomplished. The jobbing costs of the eastern half of the United States are often not more than one-half the corresponding costs in the West. There is an equally wide variation in the distributing margins in different cities, sometimes due to the efficiency of the men engaged in the jobbing business, sometimes to natural local conditions, and sometimes to understandings between different jobbers through which a minimum margin is established. The record shows that in one city the average mark-up of the jobbers is ap-

proximately 10 per cent. There is the most active competition there, turn-overs are quick, the margin on each transaction is small, and the per capita consumption is high. In another city in one of the richest, most fertile states, where a few friendly jobbers work together, buying cars of fruit jointly and selling at a high margin on each turn-over, the average mark-up for the year is 22 per cent. The consumption there is restricted, sales are slow, and the business is transacted on an artificial competitive basis. There is apparently a considerable variation in the margins, due to the number of times a jobber or a retailer turns over his capital. Quick sales at a small margin of profit is the policy usually followed by those who specialize in the citrus fruit business. They make their annual profit on a large, steady volume of business. They attract the consumer with fruit that is always fresh, attractively displayed and at reasonable prices. They stimulate consumption by advertising and in other ways. Others, especially among the country retailers, or among jobbers who carry citrus fruits as a side line, do not specialize or push sales. Their losses from decay and off condition are large and their margin on each turn-over must necessarily be large to protect themselves against fluctuation in prices. These dealers are not important factors in increasing the per capita consumption. The margins charged by the retailer may run as high as 75 per cent above the cost in some cities, while in others it drops as low as 20 per cent.

We desire to bring out another phase of the orange distributing business. It relates to the fluctuations in the jobbers', retailers' and consumers' prices. The impression is widespread that the consumer's price does not fluctuate with the retail purchase price, and that the jobbers' price to the retailer does not fluctuate with the price paid the producer. In order to determine the facts, we have taken the earlot, the jobbers' and the retailers' prices in twelve representative cities for one year and have charted the fluctuations in the respective prices. They are shown in the diagram herewith.

From this chart it will be seen that the three prices, taken as a whole, do follow each other with almost exact regularity, and this must necessarily follow where the competition between the different wholesale and retail dealers exerts itself naturally. There are many exceptions to the general rule, where the retailers or the jobbers maintain a somewhat uniform price throughout the year, and especially where the jobbing and retail prices are held abnormally high after the producer's delivered price has been reduced. This is especially true where the fruit is carried as a side line to meet the ordinary demands of the customers of a store. It may be more true in the country districts where there is not so active a competition in the sale of fruit and in markets where the forces of competition do not operate naturally. When the producer's price is low, the con-

sumer reaps a benefit only when the price of the jobber and retailer is reduced correspondingly.

No attempt will be made to interpret these figures at the present time except in a general way. The citrus industry is vitally interested in seeing the cost of production and of distribution reduced to a minimum by a more efficient organization of every distributing process, and by a better understanding of the problems of each factor, to the end that a more effective co-operation between them all may be brought about. The industry recognizes that the distribution of a food product is a series of complex operations; that the railroads, the jobbers and the retailers each perform a vital economic and social service in bringing the producer and consumer together; that each should receive a fair return for the service he performs, and that a more efficient and direct service should be the aim that each should strive for, if the basic factor, the industry which furnishes the fruit, is to prosper. It also recognizes that many of the conditions under which food supplies are distributed in the cities are created for the jobbers and retailers by large economic forces and by the requirements of the consumer, which are beyond their power to influence or control. But if the producer, as well as the distributing agencies, the railroads, the jobbers or the retailers are not effectively organized, or if they are not following sound merchandizing practices, their overhead cost are excessive and they impose an undue burden on both the producer and the consumer, consumption is restricted, the investment of the producer is jeopardized, and the stability of the industry is threatened. We may suggest in a general way some of the conditions which seem desirable to be brought about.

First, on the part of the producer, it is essential that he furnish the jobbers and retailers a uniform supply of citrus fruits of dependable grade and pack and of good keeping quality if a stable merchandizing business is to be developed by either. Variable grades, packs and keeping quality increase the hazard of fruit merchandizing and the jobber and retailer must necessarily add a margin large enough to cover these risks. Uniformity in grades and supplies stabilize trade and the margins naturally adjust themselves on a lower level. This is a fundamental requirement in fruit merchandizing often overlooked by the producer, difficult to handle on account of the large number of growers involved, but one in which progress is being constantly made. The producer must utilize every known agency under his control to produce a higher grade of fruit, at a lower cost of production. To this end he is also making progress, with the aid of the state and federal governments, though there is no immediate prospect that the costs of production will be reduced. Rather are they growing higher on account of the higher costs of material and labor. It now costs the producer an average of \$1.29 per box for oranges

and \$1.90 per box for lemons to produce the fruit, handle it, and place it on the cars for shipment.

Whether the cost of transportation will be reduced only the future can develop. At the present time the industry is shipping the fruit under rates established by the railroads and sustained as reasonable by the Interstate Commerce Commission. They represent \$1.00 per hundred pounds on lemons and \$1.15 per hundred pounds on oranges. The orange rate represents 20.5 per cent of the consumer's dollar, based on the representative prices of 1914. The average haul of oranges is approximately 2,500 miles, absorbing thereby a larger proportion of the consumer's dollar than other products contribute where the sources of production and consumption are closer together.

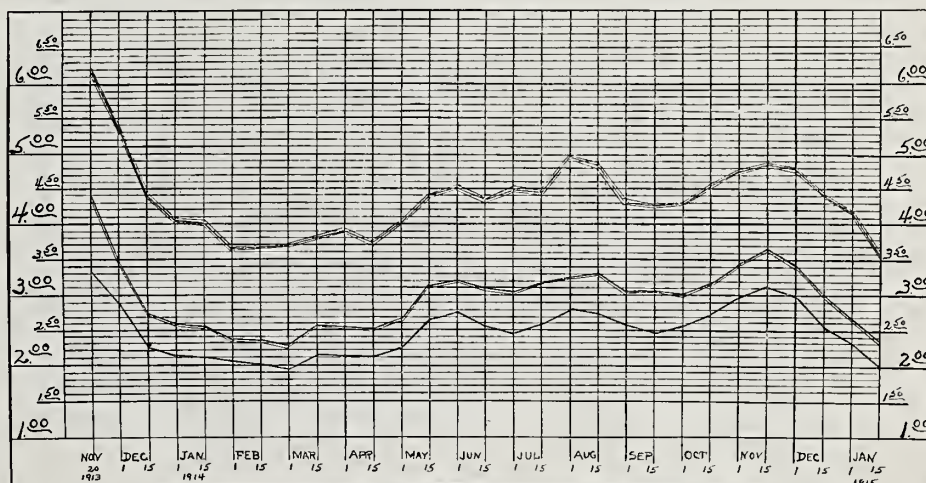
The position of the jobber in the distributing system is widely misunderstood. To the so-called middleman the high cost of distribution is popularly ascribed, and there is a widespread agitation that he be eliminated. This investigation shows that 8.2 per cent of the consumer's dollar, or a mark-up of 14.2 per cent, represents his margin, and that he is not the leading factor in the cost of distribution. The jobber performs a distinct function that must be performed by someone in assembling the fruit in the towns and cities, in developing trade with the countless retail dealers in the rural districts and cities, and in blanketing the credit and other distributing risks for the producer. His function is somewhat similar to the banker, who furnishes the money through which trade can be conducted, except that his business is not so highly organized, is not under state and federal direction and control, the abuses are not so easily corrected, and they are therefore featured in the popular mind out of proportion to their true relation to the business of the middleman as a whole. The jobbing interests of the country owe it to themselves to see that the unprincipled middleman is eliminated; that practices of every kind that are unfair to the producer are cut out; that any practice that slows down the natural forces of competition and thereby reduces consumption be brought under strict regulation. In no other way can the legitimate function of the fruit jobber in bringing the producer and retailer together be properly developed and safeguarded against radical legislative action that may in the end be undesirable for both the producer and the consumer alike. We would suggest that the jobbing interests of the country seek the co-operation of the Bureau of Markets of the United States Department of Agriculture, to the end that a co-operative, systematic investigation of all the conditions surrounding the function and the practices of the jobbing trade be made. This investigation would reveal the wastes in the wholesale distributing system and it would furnish the basic facts on which the jobber's relationship to the public and to our modern industrial life could be more clearly understood. Other

industries, such as the cold storage interest, the railroads, the handlers and shippers of fruit, poultry and eggs, have been greatly benefitted by co-operative investigations with the constructive branches of the federal government. It is not too much to hope that such a co-operative investigation would have a far-reaching influence on the economic phase of the wholesale distributing business and on the relationship of the jobber to the producer, to the retailer and to the public at large.

This investigation brings out clearly that the most important factor in the cost of distribution, next to the cost of transportation, is the retail distribution, which represents one-third of the consumer's dollar. The amount of the

demands, and the cost of the fruit is but one of the factors in the consumer's price. The simpler the service, the less the overhead cost, and, in those cases, the consumer pays primarily for the fruit, with only a comparatively small overhead charge added for service and profit.

The retail distributing business is a vital link in the chain between the producer and the consumer. The desire for fruit is awakened by suggestion, by seeing attractive displays of fresh, luscious fruit in the windows of the store, on the counters, or in other forms of display. It is stimulated by the attractive fruit stands and by the push carts laden with golden oranges, by advertising in the magazines, the newspapers,



Fluctuations in Carlot Jobber's and Retailer's Prices.

— Jobber's Cost

- - - Jobber's Selling Price

... Retailer's Selling Price

consumer's dollar represented by the gross retail cost is four times the amount represented by the jobber's cost. It is more than the proportion absorbed by the cost of transportation and the jobber's cost combined. It is nearly equal to the amount returned for the fruit on the tree, which includes the cost of production and the grower's profit, and the cost of picking, hauling and packing.

There are several classes of retailers engaged in the fruit business: the fancy fruit store, the high class grocery store, the average grocery store, the chain store, the fruit stand and the fruit vender. The present retail system is largely the result of the demands of the consumers which each class serves. A retailer's overhead charge includes store rents, salaries and wages of employees, interest on capital, cost of purchasing, re-sorting, displaying, storage, and delivering goods, taking orders, telephone, light, heat and other store expenses, losses from decay and deterioration, taxes, insurance and other necessary expenses. Most of the expenses are also included in the jobber's overhead costs. Where the fruit is sold from push carts and street stands, some of the expenses are eliminated or are reduced. In the fancy fruit stores and in the large grocery stores which cater to the well-to-do, these overhead charges are naturally larger. They make up the cost of the service which the consumer

the street cars and other advertising mediums. It is promoted by prices which bring the fruit within the reach of the average consumer. The retail dealer, more than any other factor, creates this appetite appeal, because he comes in direct contact with the consumer, and he stimulates or retards it by charging reasonable or exorbitant prices.

The retail dealer must therefore know how to make artistic fruit displays if he is to catch and sustain the interest of the consumer. The fruit must always be fresh in appearance, free from decay and appetizing in every way, and the price must be reasonable. If the appeal to the consumer's appetite is not strong and continuous, the retailer does not increase the consumption. If the price is not reasonable, the fruit cannot be purchased by the average consumer. If the sales are not rapid, it wilts, loses color, decays and is a drag on the hands of the retailer. Under these conditions the retailer, unless he is a fruit specialist, does nothing to encourage sales. The unattractive fruit is destroying the desire on the part of the consumer, the losses from bad condition are excessive and the retailer must add a margin large enough to cover these losses and risks. Attractive displays and quick sales, at a reasonable margin of profit on each transaction, increase the per capita consumption and make a satisfactory profit for the dealer at the end

of the year. Any other system jeopardizes the interest of the producer, reduces the volume of business of the jobber, and keeps the net profit of the retailer below what it otherwise might have been.

The retail fruit business needs the same careful investigation as that suggested for the fruit jobber, with a view to improving the entire retail business system, to developing better methods of creating an increased consumption, and of putting the entire retail system on a basis which will make it the most vital factor in handling the rapidly increasing fruit crop. To accomplish this end, the average retail fruit dealer needs the co-operation of the producer and the jobber. The consumer demands a service that imposes a heavy overhead charge on the retailer's operations—a condition which the producer does not usually appreciate. In all of these operations the consumer is king. By gaining his confidence and serving his best interest, the interests of the producer, the jobber and the retailer are assured. Without the interest of the consumer, all merchandizing efforts must fail. The aim of every factor in the fruit business should be to stimulate the desire of the consumer for fruit, and then to give him an attractive, fresh, wholesome supply at a price which pays a reasonable profit to every factor in-

volved and yet be well within the consumer's reach.

Whether the jobbing and retail fruit business is organized along economical and efficient lines, whether the purchasing, the deliveries, the credits and other features of the business are handled with the fewest number of steps and with a minimum of economic waste, and whether the handling of the business by producer, jobber and retailer serves the best interest of the consumer the author is not prepared to say. It is recognized that both the wholesale and retail systems are products of modern industrial and social life and that changes in the system must progress slowly. The facts outlined in this discussion are not presented in a spirit of criticism, but in the hope that they may lead to investigation and to a clearer understanding of the different phases of distribution; that they may induce the jobbing and retail fruit interests, the railroads and the producer to study their own problems more carefully, and to study the problems of every other factor as well, to the end that the fruit distributing system from the producer to the consumer may be made more stable, more direct, more efficient, with every wasteful step and process eliminated and all handled to gain the confidence of the consumer and to serve his best interests.

Therefore it is of vital importance to the apple grower to figure his business, not from year to year as he has been doing, but on the basis of not less than a five-year period."

The fluctuations of the apple market from year to year are very apparent in the following tabulation of returns net to the Cashmere Fruit Growers' Union of the Wenatchee Valley, selling charges of the Exchange having been deducted, showing total apple shipments and average prices per box for all three grades by years (to get the net returns to the individual grower, deduct five cents per box, the local assessment to cover cost of assembling, loading, etc.):

	Extra Fancy		Fancy	
1910	32,543	\$1.35	8,396	\$1.14
1911	36,240	1.62	8,770	1.27
1912	113,322	.75	40,468	.54
1913	97,899	1.58	58,013	1.31
1914	100,007	.79	57,616	.64
5 years....	380,011	\$1.11	173,263	\$0.90
	Choice		General	
1910	11,576	\$0.85	52,515	\$1.20
1911	15,486	.93	60,496	1.39
1912	39,764	.61	193,554	.68
1913	26,388	.83	182,250	1.38
1914	31,544	.46	189,167	.69
5 years....	124,708	\$0.68	677,982	\$0.97½

It will be noted that the average of the yearly averages is \$1.06, whereas the average on the total tonnage of 677,982 boxes is 97½ cents. This seeming discrepancy is explained by the fact that the shipments in 1910 and 1911, when prices were good, were about a third of the tonnage in the poor years, 1912 and 1914. Manifestly, if the tonnage had been the same in all five years, the average to the Union would have been \$1.06 per box, or \$1.01 net to the grower. As a matter of fact, some members of the Union have actually received more than an average of one dollar because they had exceptionally good varieties and grades. The reason for the superior average of Rogue River is that most of its apple tonnage consists of Yellow Newtown Pippins and Spitzenbergs, varieties which command good prices, whereas Cashmere has also a big volume of varieties like Ben Davis, Black Twig, Jonathan, Stayman and Gano, very prolific and profitable, but showing a low net average per box.

The following gives total tonnage and grand average per box for five years on Spitzenbergs and Newtowns from the two districts:

Variety	Cashmere		Rogue River	
Spitzenbergs.	153,725	\$1.10	64,507	\$1.07
Y. N. Pippins	20,704	1.17	165,450	1.19

Statistics have been collected which show average annual yield of 500 boxes per acre in the Cashmere district. Trees above six years of age which do not yield this equivalent are regarded as defective. Scores of orchards have a record of better than 800 boxes for many seasons. Opinions differ on cost of production. Some claim the expense is less than 50 cents per box, while others say 65 cents. It depends on widely varying conditions. Growers generally say they can pay themselves a good salary, provide comfortable homes for their families and realize 12 per cent on their investment if prices will average a dollar per box.

Northwestern Fruit Exchange Report

ALTHOUGH Northwestern apple growers are discouraged because of low prices in 1912 and 1914, it is now discovered that the average for five years, including these two disastrous seasons, is around one dollar per box net to the grower. This is a fair indication that the same average will be maintained for the future, assuring affluence and independence if orchardists take proper precautions to meet inevitable fluctuations from year to year. The situation is thus summed up by W. F. Gwin, vice-president and general manager of the Northwestern Fruit Exchange, in announcing today the general average returns both for the current season and the past half decade. All selling charges deducted, the Cashmere Fruit Growers' Union realized 69 cents per box on 189,167 boxes, which is all of the 1914 crop for which accounting was completed on December 31st, 1914. It is not expected that the final results will change this average much, but it might be a few cents less. For five years the Cashmere average is 97½ cents on 677,982 boxes, all grades and varieties. The only other growers' organization which has used the Exchange central selling agency for five years is the Rogue River Fruit and Produce Association of Medford, Oregon. The average for 1914 is 61 cents per box; for the five-year period it is \$1.04 on total shipments of 317,580 boxes. Judging from averages for other districts computed on December 31st it is expected that the general crop average for 1914 to all Exchange ship-

pers will be between 60 and 65 cents per box.

"The orchardist must take the excess above a dollar per box in the good years," declared Mr. Gwin, "and create therewith a sinking fund to finance himself in the poor years. Having received this warning, he should not complain if bankruptcy overtakes him as a result of dissipating his reserve in land and stock speculations, automobiles, fine residences and trips abroad. These things are all right when we can afford them; but the last thing we can afford is to gamble with the capital required to operate our business. Just now the grower is suffering a severe headache, the result of a prolonged speculative debauch. The thing to do is sober up and face the situation the same as other business men are doing. The result is sure to be lasting prosperity. The troubles with apple growers are chiefly due to their own misapprehensions," insisted the marketing official. "They have proceeded on the theory that production and prices from year to year are stable. Nothing in the history of the industry, either here or elsewhere, justifies such supposition; nevertheless, orchardists have adopted this false assumption quite generally and have followed it to inevitable grief. The figures we give out today afford both explanation and remedy for existing conditions. In the future there will be years when prices will fall as low as they did in 1912 and 1914. There will also be seasons of high prices like those of 1910, 1911 and 1913.

Sales Managers of the Northwest Fruit Shipping Concerns

MR. W. F. GWIN, vice-president and general manager of the Northwestern Fruit Exchange, was born in Baltimore, August 16, 1880, being now nearly 35 years of age. Mr. Gwin during his boyhood school days attended the public schools in the City of Baltimore, afterwards attending the Baltimore City College. Mr. Gwin began his business career with The H-O Company, the big cereal mills of Buffalo, New York, made famous by originating and introducing the breakfast food known as "Force," of which the famous "Sunny Jim" campaign was the leading advertising feature. Mr. Gwin was with this company during the campaign and continued with them for seven years, starting in as sub-salesman, later working up to the position of territorial sales-manager. Later upon the invitation of Arbuckle Bros., the celebrated Arbuckle coffee manufacturers of New York, he entered their employ, organizing a field sales force. In his comment upon his experience in connection with Arbuckle Bros., he presents some serious thought for the fruitgrowers, which is so well expressed in his own words that it seems wise to quote:

"When you and I were boys and for many years prior to that Arbuckle's Ariosa Coffee was an article of almost universal consumption in every part of the United States. It was sold alike in mining camps and fashionable groceries in the large population centers. It was the most extensively advertised commodity on the domestic market. Millions had been spent to advertise it. It became an article of such universal sale that it was naturally adaptable as a trade leader. Grocers began to cut the price in order to attract customers to their stores, hoping to sell them

other articles at the same time. Finally it became customary to sell the article at cost. After a good many years of this sort of thing the grocers began to make determined efforts to root the article out of their trade. No effort was made by the manufacturers to



H. M. GILBERT

President and Manager of the Richey & Gilbert Company, North Yakima and Toppenish, Washington, which is now in combination with the Yakima Horticultural Union and the Yakima Fruit Growers' Exchange in the selling forces under the head of the Yakima Fruit Sellers, with Mr. Gilbert as general manager.

overcome this condition and consequently at last the sales began to diminish and in large sections of the country almost entirely vanished. My job was to put the article back into the trade on a plan which took cognizance of the situation and was designed to protect the dealers who handled the brand. The State of Iowa was selected for the test because that territory was absolutely as near zero from a sales standpoint as anywhere in the country. It was the hardest sales proposition I ever tackled. I had a pretty free rein and eventually bought eight horses and had Studebaker build special wagons and put a crew of salesmen with a stock of coffee on the wagons and covered every store, crossroads and all, in the State of Iowa. We put the brand back into 75 per cent of the stores of the state and extended the campaign into other states."

Mr. Gwin's introduction into selling green perishables was in 1907 when he entered the employ of the California Vegetable Union. While in their employ he was invited by Crutchfield & Woolfolk of Pittsburg, one of the largest produce houses in the United States, to assume the position of sales-manager for their carlot distributing business, which included a wide variety of fruits and vegetables originating in all parts of the country and approxi-

imating a total of 5,000 cars annually. While associated with this firm Mr. Gwin took his first trip to the Northwest and states he became much interested in this country. While in the Northwest he organized the Kenmar Orchard Company, of which he is secretary and treasurer, which owns eighty acres of orchard property in Southern Oregon near Medford. He finally decided to cast fortunes with the Northwestern Fruit Exchange, coming out in 1910, being instrumental, together with a number of prominent orchardists, in organizing the Northwestern Fruit Exchange, of which he was elected manager, which position he still continues to hold. Mr. Gwin draws a conclusion in connection with the Arbuckle story already related which is well worth repeating to the fruitgrowers for their consideration:

"That whereas fruitgrowers out here are tremendously exercised over the condition that undoubtedly exists, viz., of exorbitant profits being exacted by retailers, they should remember that they themselves are responsible for the organization of the industry in all of its relations, and that these conditions will never be satisfactory until they themselves study the causes and seek to remove them. They can be removed not by any arbitrary dictation, but only through intelligent co-operation with the trade. They must approach the whole question in a spirit of sympathy and fairness. Arbuckle's Ariosa went down to defeat because the dealers did not get profit enough, an exactly opposite cause, you see, to the fruitgrowers' complaint, and yet both extremes converge to the same issue. In other words, it is just as dangerous to the producer for the trade to



W. F. GWIN

Vice President and General Manager of Northwestern Fruit Exchange, with headquarters in the Stuart Building, Seattle, Washington.



FRED EBERLE

Sales Manager for the Horticultural Union, now combined in selling forces with the Yakima Fruit Sellers, North Yakima, Washington, of which Mr. Eberle is assistant manager.

make too little profit on his products as too much. It is a regrettable fact that whereas the retailers in North-western fruits have perhaps been charging too great profits the direct customers of the growers out here, that is the wholesaler dealers, have in the past five years made too little profit. The consequence is that they become harder and harder to interest each year. This whole question of the equities and the balances in the commercial relations of producer, jobber and retailer is one which is worthy of mighty serious study."

Mr. Gwin is so well known by the fruitgrowers of the Northwest and the trade in general any personal remarks on the part of the editor would be



B. A. PERHAM
Sales Manager for the North Pacific Fruit
Distributors, with headquarters at
Spokane, Washington.

faint praise. Mr. Gwin, in addition to having experience and training with two very large commercial companies, The H-O Company and Arbuckle Bros., has had eight years' experience in selling green fruits, being connected with some of the largest institutions in the United States in this line, viz., The California Vegetable Union, Crutchfield & Woolfolk and the Northwestern Fruit Exchange. Mr. Gwin is regarded by all who know him well as being a man of splendid ability, a good organizer, an expert on system and accounting and has the highest ability as salesman and sales-manager. It was in recognition of these qualities, which he possesses to the fullest extent, that he was selected as general manager of the Northwestern Fruit Exchange.

MR. H. M. GILBERT was born near Geneseo, Henry County, Illinois, on a stock farm, October 22, 1862—52 years old. Graduated from six-years' classical course at Knox College, Galesburg, Illinois, in 1885, with an A. B. degree. His wife also graduated in the same class. Mr. Gilbert was honored

with an A. M. degree a few years later. Came to North Yakima, Washington, in the fall of 1897. Planted his home orchard in 1898.

Organized Richey & Gilbert Company in 1900, of which he has been president and manager continuously and made it a large and efficient marketing agency. Mr. Gilbert has accepted the position of general manager of a new selling agency, the Yakima Fruit Sellers. This company combines the selling forces of the Yakima County Horticultural Union, Yakima Fruit Growers' Exchange and Richey & Gilbert Company, which together shipped nearly 2,500 cars of fruit last season.

Main interest is that of a grower, having nearly 400 acres of apple orchards. Is president of Tieton Water Users' Association, a government project, irrigating 34,500 acres near North Yakima. President of Central Bank, Toppenish. Did some good advertising in the Orient for boxed apples in a trip around the world in 1913 with his wife and family of seven children. Believes positively in the Growers' Council movement and in an efficient, economical arrangement on a reciprocal basis to harmonize the marketing of fruit in the Northwest.

MR. FRED EBERLE, whose photograph appears in this issue, is a native of Missouri and was born in that state thirty-eight years ago. His education was obtained in the high schools of Wathena, Kansas, and at the University at St. Joseph, Missouri. He began his business career with the firm of John A. C. Gordon of Wathena, who was at that time an extensive shipper of Northeastern Kansas fruit, no doubt acquiring at that time a taste for that line of business, which has made him so successful at the present time. Mr. Eberle is considered one of the best posted and efficient sales-managers of the Northwest, having had experience for years as traveling salesman. He has a large acquaintance among the trade and this acquaintance is of great value to him in his present position. He has been with the Yakima County Horticultural Union for five years, four years as salesman on the road and the past season as assistant manager, and has naturally had considerable influence in shaping the policies of the Union. Beginning with April 1st of this year, he takes up the duties of sales-manager for the Horticultural Union and assistant manager for the Yakima Fruit Sellers, who will handle about 3,000 cars the present season. As a man, Mr. Eberle has a friend in every acquaintance and inspires confidence with both grower and shipper alike by his alert and businesslike methods and well-balanced judgment.

MR. H. F. DAVIDSON was born on his grandfather's farm in Knox County, Ohio, near Mt. Vernon, July 20, 1868, and is now nearly 47 years of age. His father, Charles Davidson, was a carriage manufacturer near Lima, Ohio. Mr. Davidson spent his early boyhood

days in Lima, where he attended school. In 1882 his father moved to Canton, Illinois, with the family. Mr. Davidson continued his school work, later taking a commercial course in a private school, afterwards attending the Indiana Normal School at Valparaiso, and after graduation teaching school for several terms in the State of Illinois. In 1890 Mr. Davidson came to Oregon, settling in Hood River. In 1891 he became active in developing the irrigation system on the west side, now known as the "Farmers' Irrigation Co." Mr. Davidson was one of the original incorporators and the first manager of the Hood River Fruit Growers' Union, which was organized in 1893, being the first co-operative



H. F. DAVIDSON
President and Manager of the Davidson Fruit
Company of Hood River, now combined with
the Apple Growers' Association of Hood River.
Mr. Davidson was for two years president of
the North Pacific Fruit Distributors. He is
president of The Fruit Sellers and Board of
Control and will have an official position with
the Apple Growers' Association of Hood River
for the coming season.

fruitgrowers' association formed in the Northwest, afterwards merged with the Hood River Apple Growers' Union, which is now included in the Apple Growers' Association of Hood River. In 1907 Mr. Davidson resigned as manager of the Hood River Fruit Growers' Union, incorporating the Davidson Fruit Company, which continued to be a prominent factor in fruit growing and shipping for many years. In the year 1912 Mr. Davidson, becoming convinced that the future prosperity of the fruitgrower, he being a fruitgrower owning a large acreage, depended upon co-operative work and that better prices could be obtained through co-operation, there being a number of competing individual shipping concerns, so therefore he merged the Davidson Fruit Company with the Hood River Apple Growers' Union, forming the Hood River Apple Growers' Association, the latter buying out

Continued on page 14

Loosen up a bit on this say-so:

You lay-to long enough to buy some Prince Albert tobacco. Jam your old jimmy pipe brimful to the spilling-spot, or roll a makin's cigarette, make fire with a match—and go on. *For you've got yours!*

That's all there is to it—this digging fun out of a pipe or a cigarette—if you follow suit and play the game via P. A., *because then* you've switched to the right track! And your tongue will be fine-like-silk whether you smoke one load *or a hundred!*

For Prince Albert is made by a patented process that *cuts out* tongue-bite and throat-parch! Now, you just let it sift in that no tobacco ever was, or can be made like



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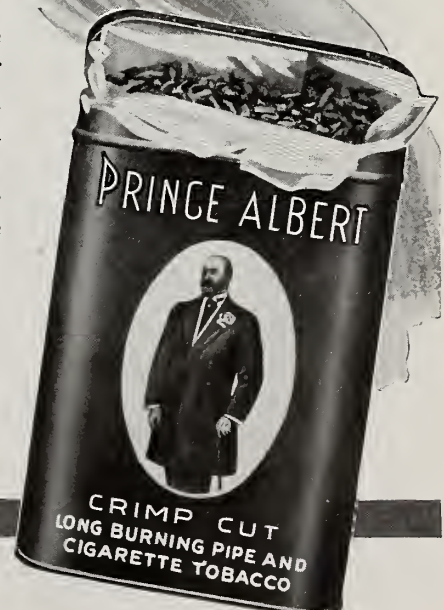
Quit teasing your smokeappetite. Don't let your palate protest every time a whiff of jimmy pipe joy or cigarette makin's happiness breaks into the atmosphere!

Cut-loose with a pipe or cigarette and a tidy red tin of P. A. and

swing open your chest to some spring smoke-sunshine. For then you'll qualify to be a real and true pipe-r on the P. A. band wagon, which means 33d degree tobacco happiness—and a guarantee that you'll be jimmy pipe joy'us and cigarette cheerful!

Prince Albert smokers everywhere are enthusiastic over the classy pound crystal-glass humidor with the sponge-moistener top which keeps the tobacco in fine fettle—always. It's a thing of joy for every man who smokes a pipe or rolls his own cigarettes. Prince Albert is also sold in toppy red bags, 5c (handy for cigarette smokers); tidy red tins, 10c; and handsome pound and half-pound tin humidors.

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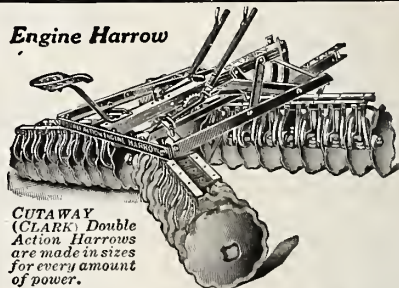
Change in By-Laws North Pacific Fruit Distributors

THE North Pacific Fruit Distributors, at a meeting held in Spokane on April 6th and 7th, have incorporated into their by-laws many important changes, which were made for economy, efficiency and equality of control, which in the minds of the trustees will make this institution much stronger during the coming year than in the past. The purpose of the organization is to provide a co-operative, non-profit selling agency for the fruit-growers of Oregon, Washington, Idaho and Montana. It is the object of the Distributors to maintain the highest efficiency possible and to work in harmony for the purpose of avoiding competition of one selling concern with another. The membership shall consist of associations, corporations or other organizations of fruitgrowers formed for the purpose of assisting the growers in harvesting and assembling their crops. The corporations, associations or organizations of fruitgrowers holding membership in the Distributors shall be known as "Sub-centrals." The election of trustees or directors of the sub-centrals is changed and instead of each district having one trustee each district will now be given two trustees for the first 500 cars or fraction thereof and an additional trustee for every 500 cars marketed in a normal year. The members so elected shall represent the sub-central in the Distributors and together shall constitute the board of trustees. The number of trustees shall be determined each year on the amount of tonnage marketed the previous year. The Distributors instead of sending representatives to the different districts for the purpose of organizing sub-centrals will expect this work to be done by the fruitgrowers in the different fruit-growing sections. However, if any sub-central requires an official of the Distributors to assist in this work the sub-central shall bear the expense. The system of revenue charges for selling fruit has been radically changed. During the last two years the charge has been so much per box. From now on the cost of selling fruit and conducting the business of the North Pacific Fruit Distributors and

the expense incurred by it shall be pro-rated among the sub-centrals in proportion to the tonnage marketed through the Distributors. No endeavor shall be made to fix such costs and expense in advance. Before the close of each month the Executive Committee of the Distributors will prepare a budget of expense and expenditures for the coming month and collect the same from the sub-centrals pro rata on the proper basis, to be determined from time to time by the Executive Committee. At or before the close of each fiscal year the expenses shall be adjusted and pro-rated among the sub-centrals entirely upon the tonnage basis, each sub-central paying such proportion of the expense of the year as the tonnage marketed shall bear in proportion to the whole tonnage marketed during the year. If in any month any sub-central shall pay less than the proper amount it shall be called on to pay up the deficiency. If, on the other hand, any sub-central shall have paid more than the amount it will be refunded. The annual meeting was scheduled for the last Monday in April. In the future the annual meeting will be held the first Monday in March of each year at the main office of the Distributors or at such other place as shall be determined by the Board of Trustees. Officers, members or stockholders, as well as any fruitgrowers belonging to the sub-centrals marketing the fruit through the North Pacific Fruit Distributors, shall be privileged to be present at the annual meeting. The manager shall present in full detail report of the business and affairs of the Distributors and the officers during the preceding year at each annual meeting. These reports and policies shall be subject to discussion by those entitled to be present as designated. The Board of Trustees shall hold regular meetings in August and December of each year, the dates to be determined by the Executive Committee. Special meetings of trustees may be held at any time, subject to the call of the president or, in his absence, by the vice-president. The president or secretary of the corporation shall call a meeting of the trustees

at any time upon the demand of all the trustees of any sub-central; notice of the meeting will be given by mail to each trustee at his last known address five days previous to the meeting. The Executive Committee of this corporation shall hold regular meetings the first and third Monday of each month unless otherwise determined by the Executive Committee. When they hold such other meetings as the manager may determine upon or require each sub-central may send to said executive meetings its manager and shall be expected to send the manager to the last regular meeting each month. The managers of sub-centrals will be allowed to participate in discussions and express views and opinions upon all matters coming before the meeting. The trustees shall elect or appoint from their own number an executive committee of three; no two shall come from the same sub-central, nor shall more than one member of the Executive Committee be appointed from any one of the following districts: Wenatchee, Yakima, Western Oregon, Walla Walla, Southern Idaho, Lewiston and Clarkston, Spokane and Montana. The Executive Committee shall have supervision and manage the business affairs of this corporation. It shall be vested with all the power of the Board of Trustees relating thereto. The Executive Committee shall have power to elect and discharge all officers and employes other than those appointed by the Board of Trustees as provided; to make contracts, establish rules for packing and grading, develop markets and establish market connections, inspect and sell fruit, with power to do everything that is necessary for carrying on the business of the North Pacific Fruit Distributors, subject to the control of the Board of Trustees. Every member of the Board of Trustees shall be a duly elected representative from his sub-central. The Board of Trustees shall require each officer, agent or em-

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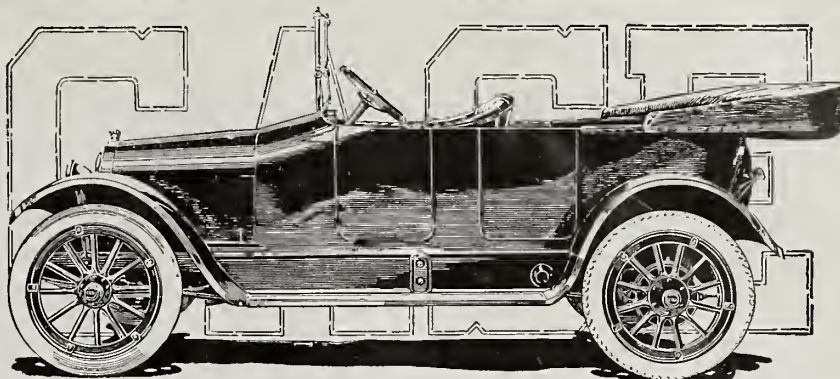
ploye of the company handling money to give bond for the faithful performance of his duty to such amount as the trustees shall determine. Each bond to be given by a surety company, approved by the Executive Committee, and be paid for by the North Pacific Fruit Distributors. The president shall be the executive officer of this corporation and shall preside at all meetings of the trustees and, with the secretary, he shall sign all certificates of membership and other documents like deeds, mortgages, etc., in reference to the property as may be recommended by the Board of Trustees. The president shall call a meeting of the trustees when requested by the trustees as provided for. He shall have custody of all bonds executed by any officer or agent of the corporation, except his own bond, which shall be deposited with the secretary. The president must be a grower and a member of the Board of Trustees. He shall not draw his salary or receive any pay from the Distributors other than such sum per day as may be allowed when employed in the business of the corporation. He shall not have managerial power by virtue of his office, nor take active part in the management of the business of the Distributors other than as a member of the Executive Committee or as he may be employed in the service of the corporation by order of the Board of Control.

Pruning the Gooseberry and Currant

Pruning the gooseberry to a bush form in this country is recommended by Professor C. I. Lewis, chief of the Division of Horticulture, Oregon Agricultural College. Berries are borne on the two, three and four-year-old wood, but occasionally the fruit grows too small on the four-year-old wood and it should be pruned out. The currant bears most of its fruit on the two and three-year-old wood. All canes of either of these fruits should be cut out when they begin to droop toward the ground, and all canes that are weak. The plant should be reduced to the number of canes that will grow in a vigorous condition. When canes tend to grow gnarly, old and weak they should be removed. The entire planting should be renewed in from six to ten years. While the bushes will fruit for a longer time the fruit tends to grow too small to be profitable.

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The Oregon State Horticultural Society has just issued the proceedings of the twenty-ninth annual meeting, held at Medford, December 2, 3 and 4.



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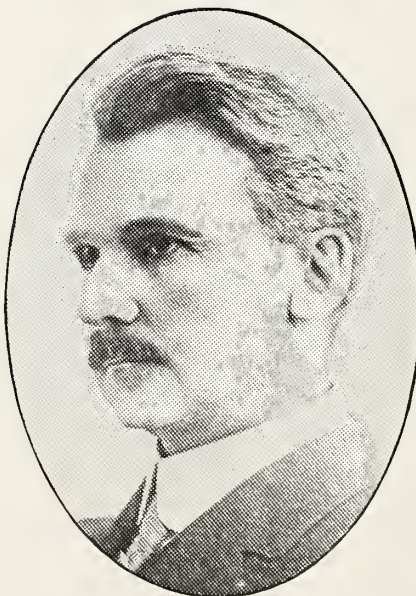
Sales Managers, Etc.

Continued from page 10

the National Apple Company of Hood River, thus combining the three plants into one, thereby eliminating self-competition. The various fruit corporations controlled by Mr. Davidson, including his private holdings, amounted to 425 acres of orchard, about 60 per cent being in bearing at the present time, which produced in 1914 60 cars, the crop being estimated by Mr. Davidson at 90 cars for 1915. Mr. Davidson was one of the original incorporators and the first president of the North Pacific Fruit Distributors in 1913, being re-elected in 1914, at the same time being one of the nine trustees representing the Hood River district in April. After the Hood River district had withdrawn from the North Pacific Fruit Distributors Mr. Davidson sent in his resignation as president of the North Pacific Fruit Distributors, which was accepted. Mr. Davidson represented the North Pacific Fruit Distributors in New York City in 1913-14, looking after the Atlantic seaboard apple business and the exports to European countries. Mr. Davidson will take charge of the marketing of the Hood River strawberry crop during the season of 1915, which will amount to about 80 cars. Mr. Davidson was active in organizing the Fruit Growers' Council and the Northwest Fruit Shippers' Council. At a meeting held in Seattle in January and in Tacoma in February and at a meeting of the fruit shippers held in Seattle, March 12, 1915, the Fruit Shippers' Council was organized and Mr. Davidson elected as president. Mr. Davidson believes that the fruit-growers in the Northwest are justified in expecting the Northwest Fruit Shippers' Council will effect a much wider and more systematic distribution of the future crops of the Northwest than

could be done in any other way. Mr. Davidson was 22 years of age when he came to Hood River in the year 1890, and has spent 25 years as a grower and marketer of apples, strawberries and other fruits, devoting practically all of his time to this kind of work. He has held many positions in connection with the fruit industry both in executive capacity and sales capacity. He has made many trips throughout the fruit-producing sections of the United States, visiting nearly every one of importance, and has also visited practically every city of importance in the United States where there is jobbing trade and fruit handled in quantity. He has spent two seasons in New York City in looking after the fruit business, where a greater quantity of fruit is consumed annually than in any other city in the United States. Mr. Davidson is a close observer and with 25 years has accumulated experience, gained in knowledge and developed judgment about growing, shipping and selling fruit that means ability and is ably recognized by the fruitgrowers honoring him with positions which he has held, and he is generally recognized as one of the very ablest men in the fruit business of the Northwest.

M R. B. A. PERHAM, sales-manager for the North Pacific Fruit Distributors, located at Spokane, is one of the genuine, original Hood Riverites, having been born at Hood River, Oregon, April 16, 1879, now 36 years of age, being a young man still in the prime of life. His father crossed the plains, leaving Indiana in the spring of 1850, being a pioneer, arriving at Oregon City in the fall of that year. His mother left Harrisburg, Pennsylvania, with her folks in the spring of 1851, traveling by boat to Panama, thence across the Isthmus of Panama on the backs of mules, the general mode of traffic across the Isthmus at that time, to the Pacific Ocean, going straight to



H. E. SMITH
 Sales Manager North Pacific Fruit
 Distributors

Tree Supports



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Portland, Oregon, and from there to Linn County, where her family settled. In 1884, at five years of age, Mr. Perham moved with his parents to Portland, living in and near Portland until 1898, attending the public schools of that city and also the high school. In 1898 he took a position as a boy with the Goodyear Rubber Company, one of the largest companies in that line of business in the United States, remaining with them for some time, acting as floor salesman. On account of poor health he gave up this position, moving in the spring of 1899 to Butte, Montana, feeling that the higher altitude would benefit his health. At 20 years of age in the year 1899, with his brothers who had already an established business, he engaged in general contracting business in Idaho. He was employed by his brothers mostly in outdoor work for a short period, afterwards returning to Butte, taking a position as traveling salesman with W. S. Nott & Company, jobbers in rubber goods and fire apparatus. In 1901 he took a position with Ryan & Newton, fruit and produce merchants of Butte, as city traveling salesman, remaining with them until 1903, when on account of a severe illness he decided it was advisable to remove to a lower altitude. Ryan & Newton, by the way, are one of the oldest and biggest firms in the City of Butte, also operating the biggest houses in Spokane and Seattle, doing an immense business. With this company Mr. Perham received a splendid educational training in salesmanship. After spending several months in Portland regaining his health Mr. Perham decided to remove to Seattle, which he did late in the spring of 1903, taking a position with the firm of Ariss, Campbell & Gault, fruit and grocery merchandise brokers. This firm not only did a large

business but had a splendid reputation with the trade people whom they represented, giving Mr. Perham an opportunity to secure valuable and educational experience and judgment in the fruit business, as this firm handled many hundreds of cars of fresh fruit annually. Mr. Perham was in charge of the office of Ariss, Campbell & Gault, managing their business for several years, and later taking an interest in the firm, remaining with them until the spring of 1912, having charge of their fruit department. In the spring of 1912 Mr. Perham took the position of sales-manager of the Yakima County Valley Fruit Growers' Association of North Yakima, Washington, remaining with them until the organization of the North Pacific Fruit Distributors in June, 1913, when he was transferred to Spokane, accepting the position as sales-manager of the North Pacific Fruit Distributors, which position he has held and is holding at the present time. Mr. Perham is popular with the growers and the fruit trade. He has had splendid experience and is regarded by all as a high-class salesman.

MR. CONRAD ROSE, Wenatchee, Washington. Member Shippers' Council. Mr. Conrad Rose was born in St. Clair County, Illinois, February 6, 1862, and is now 53 years old. He attended public school until he was 14 years old, at which time he started out for himself, working in general merchandise stores and on farms. He arrived in the West in 1883 at Sprague, Washington, where he was employed by the Northern Pacific Railroad Company in capacity of fireman and engineer until 1888, at which time, after severing his connection with the company, he crossed the mountains to



CONRAD ROSE

President The Wenatchee Produce Company
Member Shippers' Council

Wenatchee, where he has since been raising fruit and vegetables on his seventy-acre tract, and since 1899 has been engaged in the merchandise business, and in addition has been the most important factor in the valley in the shipping of fruit and vegetables. He has served as county commissioner and as a member of the school board, and has taken an active part in all commercial activities. He is generally referred

to as the ranchers' friend. He is an unassuming man of few words. He has raised a family of seven children, of whom five are now living. Three of his boys are married and comfortably located on orchard tracts at Wenatchee. The Wenatchee Produce Company, of which he is president and principal owner, has grown to be the largest concern of its kind in the Northwest, and in addition to doing a very heavy merchandise business during 1914 shipped to exceed two thousand cars of fruit.

MR. E. E. SAMPSON came to North Yakima, Washington, in the year 1904, taking a position as bookkeeper for the Horticultural Union, which he filled for a year, after that becoming manager. Under his position as manager the union prospered, doing a very large and successful business. In 1909 Mr. Sampson left the Yakima Horticultural Union to accept a position as manager for the Vernon Fruit Growers' Union in British Columbia, which he occupied for two years, returning to North Yakima in 1911 and again becoming manager of the Yakima Horticultural Union in 1912, which position he has filled up to the present season. He has recently organized the E. E. Sampson Company, of which he is president and manager, Mr. C. H. Oliver being vice president and Mr. C. D. Sampson secretary and treasurer.

Mr. Sampson has an extended acquaintance with the fruit growers in the Yakima Valley and throughout the Northwest in general, having been frequently in attendance at the different gatherings of fruit growers throughout the Northwest. For ten years Mr. Sampson has been engaged in marketing and handling fruit and during this time he has formed a very extensive acquaintance with the fruit dealers throughout the United States. Mr. Sampson is recognized as a very conservative and able man with a wide acquaintance and many warm personal friends.

MR. FRED E. THOMPSON, of the Thompson Fruit Company, is justly entitled to the distinction of being considered an early pioneer in the fruit industry of Yakima County, having shipped the first carload of fruit that passed the Mississippi River from the Yakima Valley. He is a native of the State of Washington and his education was obtained in the public schools of Pierce County, after which he took spe-

cial training in a business college in San Francisco for one year.

At twenty years of age he entered business as a hop grower in the Puyallup Valley and followed this enterprise until 1893. In connection with his brother, W. L. Thompson, the Bank of Sumner was incorporated in 1888.

In this same year he purchased 160 acres of land in the Yakima Valley and during the spring of 1889 planted the first commercial orchard in the county, consisting of ten acres of mixed fruits,

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A I L S

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the Elberta peaches and d'Anjou pears being the first of those varieties to be set out in this district. In 1890 further additions were made to the orchard, increasing it to fifty acres, and in 1891 the planting was augmented to a total of ninety acres. This property was sold in 1903 for \$23,500, which was the highest price per acre for farm property in the Yakima Valley ever attained up to that date.

During 1904 and 1905 he represented the North Yakima branch house of Ryan & Newton in the capacity of manager. The output of the Yakima Horticultural Union was also handled by him in 1904. The firm of Thompson, Kain & Vaughan was organized in Billings, Montana, in the year 1900. Wholesale fruits, produce and provisions were handled by this company until Lindsay & Co. succeeded the firm.

In 1903 the firm of Carpenter & Thompson was formed to deal in fruits and produce in Butte, Montana. This was not a paying venture and was discontinued three years later.

At the present time Mr. Thompson is president of the Thompson Fruit Company, treasurer of the Cascade Orchard Company, and secretary of the Sunset

Orchard Company. All this property is located in the Yakima Valley and consists of 700 acres, 400 acres being in orchard. The combined properties are only in partial bearing, but are producing about 200 cars of fruit annually. Buying and shipping of fruits is prosecuted on quite a large scale, also handling accounts for growers.

MR. WILMER SIEG was born in Philadelphia August 3, 1859, and is now nearly 56 years of age. In his early life he attended the public schools, graduating from the high school at Harrisburg, Pennsylvania, in 1875. The same year he went to Chicago and accepted a position with the firm of Franklin, McVeagh & Co., which at that time was one of the largest wholesale grocery houses in the West. He rendered efficient service to this house, being promoted from time to time, finally being given a position as traveling commercial salesman, in which position he made good. Not being fond of commercial life on the road, he decided to make a change, and accepted a position with A. Grossenbach & Co., Milwaukee, Wisconsin, which is one of the largest fruit houses in that city. He was identified with this house twenty-five years, acting as secretary. The fact that he occupied only two positions in a lifetime before he came West is a good recommendation of his ability. Mr. Sieg has always taken an active interest in public matters and public institutions for the welfare of the people. For five years he was pres-

ident of the Citizens' Business League, an organization that stood for the advancement of Milwaukee; for fifteen years a director of the Milwaukee Gas & Light Company, and for five years president of the Milwaukee Athletic Club, which was a creation of his own starting, with a membership of the best and biggest business men in Milwaukee, developing into one of the largest and most successful clubs in the middle West. Mr. Sieg is a Mason, having taken his thirty-second degree, and also belongs to the Mystic Shrine. As a Shriner he was elected potentate of the Milwaukee Shrine for six terms in succession, which is an indication of the very high esteem in which Mr. Sieg is held by the Mystic Shrine. Mr. Sieg was also president of the National League of Commission Merchants a few years ago, which indicates the very high esteem in which he is held by the fruit dealers of the United States.

In 1912 the Hood River Apple Growers' Association sent a delegation East to secure the best ability obtainable for manager and sales manager. After looking the field over thoroughly the committee from the Hood River Apple Growers' Union finally decided on Mr. Sieg, submitting the proposition to the board of directors of the Hood River Apple Growers' Union in Hood River, which resulted in a contract being made with Mr. Sieg for three years. The first year Mr. Sieg acted as manager and sales manager of the Hood River Apple Growers' Union. In 1913 the North Pacific Fruit Distributors was organized, of which Hood River became a part. Four sales managers were selected, Mr. Sieg being the one chosen to represent



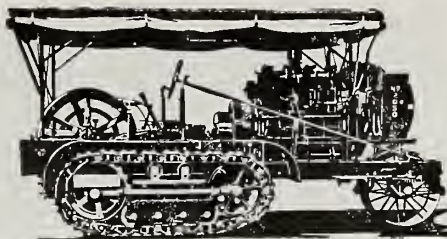
WILMER SIEG
Sales Manager North Pacific Fruit
Distributors

the Hood River district. In 1914 the same arrangements were continued. Mr. Sieg's contract with the Apple Growers' Union and the North Pacific Fruit Distributors expired this year. In the year 1915 the Hood River Apple Growers' Association decided that as their output of apples was confined principally to Newtowns and Spitzenbergs a special effort would be required in order to market these to the best advantage. They felt that this could be accomplished better by a selling organization limited to the Hood River product, and therefore decided to withdraw from the North Pacific Fruit Distributors. The board of directors of the Hood River Apple Growers' Association, composed of eight of last year's board who were re-elected and three new ones added, were familiar with the accomplishments and ability of Mr. Sieg, and decided that his services had been so satisfactory and his ability so great that he was selected to act as sales manager for the Hood River Apple Growers' Association. In the spring of 1915 Mr. Sieg was sent to New York to look after the apple trade of the North Pacific Fruit Distributors of that city, and also the export business, carrying on the work that was started by Hr. Davidson in the fall of 1913. Mr. Sieg will return to Hood River on May 1, and will immediately become active in arranging a selling plan and campaign for the coming season.

The fact that Mr. Sieg has occupied only three positions during a lifetime is evidence of the fact that the people he has served desire to retain him; each change was made because in each instance he felt he was bettering his opportunities. The fact that he was selected as one of the four sales managers of the North Pacific Fruit Distributors is another testimony to his ability. Being selected this year by the directors of the Hood River Apple Growers' Association, which handles the largest output of Newtowns and Spitzenbergs of any association in the United States, which have always sold for remarkably good prices, according to market conditions, is final evidence in recognition of Mr. Sieg's ability as an apple salesman. Mr. Sieg probably has as extensive an acquaintance with the apple dealers of the United States as any man engaged in this line of work. He is not only a hard worker, but an enthusiast, and has a very extensive acquaintance of personal friends, being an extremely popular man with all those who know him well, and those who know him best believe that the apple growers have made a wise selection in the person of Mr. Sieg to act as sales manager for the coming season.

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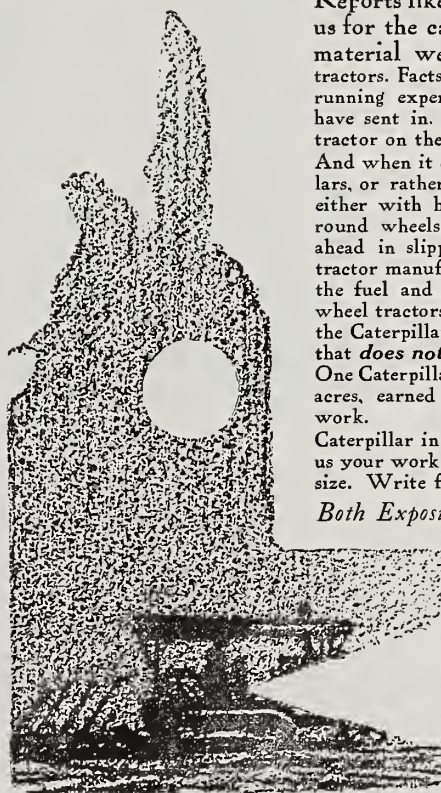
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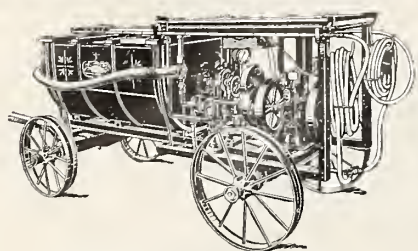
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MR. J. H. ROBBINS, general manager of the North Pacific Fruit Distributors, was born on Salem Prairie, near Salem, Oregon, in the year 1859. His parents crossed the plains a few years previous to this time, being real pioneers in the Northwest. His father, Harvey Robbins, served in the Indian wars of 1865-66, first in the Rogue River war and next in the Snake River war, and now bears the badge of service in the form of a flint arrowhead embedded in his thigh. When Mr. Robbins was two years old his family moved to Eastern Oregon, locating in the old town of Umatilla, on the Columbia River, and at the age of 19 years Mr. Robbins participated in the last Indian war of the Northwest, making a sensational ride from Monumental mine in Grant county to Pendleton for arms and ammunition for the defense of the settlers in his own community in July, 1878. Finding neither percussion caps or muskets, he left there, making one dash on horseback passing alone between two battles that were raging at Willow Springs and Umatilla Agency, in a stretch of country that was infested with war-painted redskins. His chance of breaking through was so slim that he was counted among

the dead in early reports. Mr. Robbins' ride to and from Pendleton is a part of the history of those early pioneer days. From the time Mr. Robbins was a boy until manhood he bore the arduous responsibility endured by pioneer families. His father was alternately engaged in farming, mining and merchandising, and being the eldest child and the only person available, the duties of a grown man were usually thrust upon him while he was yet a boy. A trading post in those days comprehended a store, hotel and a good many other things. Mr. Robbins, Sr., operated five or six of those along the highways and trails of Eastern Oregon. and Mr. Robbins was frequently sent out, sometimes 100 miles or more into the wilderness, to buy beef cattle for his father and drive them home, and to deliver supplies with a packtrain to miners and settlers in isolated places. He was entrusted with the position of bookkeeper by his father, which created an ambition to engage in business. His education was obtained principally in the district schools and the old Baker City Academy. Working between times, he obtained the money with which to pay his own way, and later attended the Portland Business



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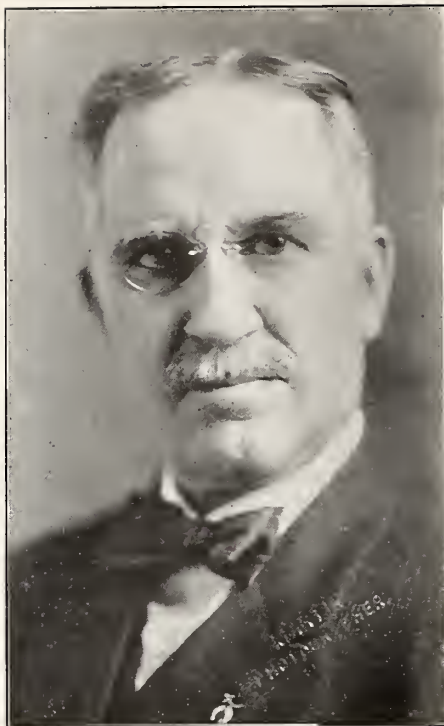
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J. H. ROBBINS
General Manager North Pacific Fruit Distributors

age which fitted Mr. Robbins for the big transaction of developing the mammoth Northwestern marketing machine on a purely co-operative basis, of which he is the head, which has been successfully operated for the past two years, known as the North Pacific Fruit Distributors.

After the Indian war Mr. Robbins played an important part in the development of Eastern Oregon. During the winter of 1880-81 he was a member of the surveying crew which made the preliminary survey from Pendleton for the railroad that later became a link in the transcontinental line of the Oregon-Washington Railroad & Navigation Company. In 1882 Mr. Robbins started upon his business career, taking charge of a general merchandise store at Pilot Rock. A little later, with practically no assets but his word, he bought out the store and continued to operate it for two years. From 1881 to 1887 he was engaged in various mercantile pursuits in different places in Eastern Oregon. During that time he married Miss Edith V. Carr of Portland. Mr. Robbins is the father of two sons, J. Frank Robbins, a partner in the Robbins, Company, a furniture and hardware concern of Spokane, and Charles H. Robbins, passenger and traffic superintendent of the Yakima Valley Transportation Company. In 1888 Mr. Robbins became active in political affairs, developing prominence in this line, being elected a state central committeeman of his party. In 1887 Mr. Robbins was appointed superintendent of the Pendleton City Water Works. He was elected treasurer of Umatilla County in 1888 and re-elected in 1890. During that time he became assistant cashier of the Pendleton Savings Bank, which position he resigned in 1893 to accept a

government appointment as receiver of public moneys and disbursing agent at the United States Land Office at La Grande. He was one of the first of Cleveland's appointees and one of the last to be retired, serving under McKinley. Again in 1898 he engaged in the mercantile business, organizing the Chicago Clothing Stores in La Grande and becoming vice president of the Traders National Bank of that city. A year later he established the First National Bank at Sumpter, serving as president until 1893, and for a term was mayor of that city, and also represented Baker County in the Oregon Legislature. He was largely connected with mining operations in Eastern Oregon of considerable magnitude and was connected with several other banks in Eastern Oregon. His business ability next led him into the organization of several independent hardware stores, known as the Basche-Sage Hardware Company. In 1903 Mr. Robbins closed out all of his business interests in Eastern Oregon and after taking a year's vacation went to Spokane, where with his brothers he put together and built up the furniture business of Robbins, Pratt & Robbins. Three years later on account of ill-health he disposed of his interests and went to California. In 1910 the Yakima fruit growers became anxious for a united marketing concern in that valley and after looking over the field thoroughly decided upon J. H. Robbins as the proper man to carry on the development and organization of what is now known as the Yakima Valley Fruit Growers' Association. Mr. Robbins was brought from California to carry on this organizing work. This is one of the strongest associations in the Northwest. A plan was procured in California and readjusted to apply to Northwestern conditions by Mr. Robbins.

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College, where he took a commercial course. Probably these early experiences account for the courage which Mr. Robbins possesses. During his early pioneer life business had to be created and developed. Things were not found "ready made." His early training developed the constructiveness and cour-


Having successfully organized the Yakima Valley Fruit Growers' Association, Mr. Robbins in 1912 was elected general manager of the Yakima Fruit Growers' Association, directing the sale and distribution of the largest tonnage ever handled by any one association or any one man up to that time in the Northwest. It was therefore more or less natural that Mr. Robbins should be selected as manager of the North Pacific Fruit Distributors, which was organized in 1913. Mr. Robbins took the helm and during the last two years over 100 local organizations have connected themselves with the North Pacific Fruit Distributors, having a membership of approximately 9,000 growers. Mr. Robbins has directed the sale of over 10,000 cars of fruit, exceeding in value \$6,000,000. The system organized by this institution has been so thorough that in two years only \$400 has been lost by the concern through the failure to make collections. Mr. Robbins is one of those who has assisted largely in changing the method of selling fruit on consignment to f.o.b. basis. It was stated previously to 1913 that about 70 per cent of the entire tonnage of the Northwest was shipped on consignment, frequently bringing low returns. Mr. Robbins has stood steadfast for straight f.o.b. business and has met with success.

MR. H. E. SMITH, sales manager for the North Pacific Fruit Distributors, came to Payette, Idaho, a few years ago to engage in the fruit industry. On account of his wonderful business ability he was soon selected as manager of the Payette Valley Fruit Growers' Association, the largest growers' co-operative organization in Southern Idaho. This business he conducted with success and with credit to himself and satisfaction to the growers. He was the unanimous choice of the Idaho people as their representative in the North Pacific Fruit Distributors when Southern Idaho districts associated themselves with that body. He was selected by the trustees of the North Pacific Fruit Distributors to represent Southern Idaho as one of the four sales managers, which position he has filled for the past two years, with headquarters in Chicago, looking after the surrounding territory. Mr. Smith is a man of recognized ability, careful, conservative, with an immense number of personal and business friends, who esteem him very highly.

Our endeavor to secure a further personal history of Mr. Smith's life has met with delay, which will explain the omission in this short personal sketch of some of the details which have been given in reference to the other sales managers.

MR. G. HAROLD POWELL was born February 8, 1872, at Ghent, New York. Graduated Union Free High School, Chatham, 1891. Graduated Cornell University, College of Agriculture, degree bachelor of science, 1895. Fellowship in horticulture, Cornell, 1896.

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Master's degree in agriculture, Cornell, 1896. Entered Delaware Experiment Station, Newark, September, 1896, as horticulturist and entomologist, and worked there five years on various commercial and scientific horticultural problems, results of which were published in bulletins and reports of the Delaware College of Agriculture Experiment Station. Entered employ of United States Department of Agriculture, Bureau of Plant Industry, September, 1901, as assistant pomologist. Organized investigations in cold storage of fruits and carried on these investigations for several years in different parts of the country on the effect of the different methods of handling in the field and the warehouse treatment, on the keeping quality of fruits; reports published in bulletins and reports, Bureau Plant Industry, Department of Agriculture, and in the reports of the chief of the Bureau of plant industry. In 1903 made pomologist in charge of fruit transportation and storage investigations. In 1904 organized investigation of the causes of the losses in California citrus fruit while in transportation from California to Eastern markets. With a corps of assistants these investigations were continued for six years and nearly one thousand experimental shipments were forwarded from California to Eastern markets under exact methods of handling, in order to de-

termine transportation conditions and market handling on the carrying quality. These investigations showed that losses in transit were due primarily to the improper handling of the fruit in preparing for shipment. The results were accepted by the industry and the methods of handling in the fields and in the packing houses were completely revolutionized within the next few years, resulting in a saving to the industry variously estimated from a half to a million dollars a year. Similar investigations were organized in the transportation of deciduous fruits in California and a similar investigation in Florida citrus fruits.

One phase of this work had to do with the study of temperature changes in refrigerator cars while in transit from California to the East. It was shown that the losses in deciduous fruits in transit are due not only to improper methods of handling, but to the slow cooling down of the fruit under ordinary icing methods. Through the co-operation of the railroads, investigations were started to determine the effect of cooling the fruit quickly after packing and before loading in refrigerator cars. This work was followed by the building of enormous precooling plants by the railroads of California and by the erection of a number of cold storage plants in the packing houses of the shippers. The precooling methods are completely changing the methods of handling fruits and vegetables in the United States.

In 1910 Mr. Powell was made assistant chief of the Bureau of Plant Industry of the United States Department of Agriculture and acted as chief of the bureau for one year, during the absence of Dr. Galloway, the chief. In 1911, manager of Citrus Protective League of California. In that capacity he made an exhaustive investigation of the cost of producing citrus fruits in Spain and Italy, a similar investigation having been made by him for the federal government in 1909. In 1912 he was elected general manager of the California Fruit Growers' Exchange.

Mr. Powell has a very wide and extensive acquaintance among fruit growers in all parts of the United States, formed during the time he was connected with the Department of Agriculture. He has a host of friends and is esteemed for his courteous manner and gentlemanly ways and admired by everyone for his ability. No man that has ever been connected with the Department of Agriculture of the United



FRED S. THOMPSON
 President Thompson Fruit Company
 North Yakima, Washington

Farm Telephones

Time was when calling a neighbor by telephone meant ringing every party on the line.

Now there is a simple arrangement on the telephones being installed in farm homes whereby central may be called—and only central hears.

Aside from the privacy this arrangement gives, it insures freedom from the continued ringing that would result from a big party line.

The Kellogg Switchboard and Supply Company, a telephone company of San Francisco, California, has this secret arrangement on their telephones. As a matter of fact, Kelloggs have gained world-wide reputation in telephony. They commenced early in the game, when a telephone on the farm was an almost unheard-of thing, and when telephones were badly needed there.

Now the ring of Kellogg's telephone is abroad in the land, and farmers wonder how they ever got along without it. Is there a time when a quickly ripened crop demands immediate attention? The farmer gets in touch with all sources of help for miles around. Does a member of the family fall ill? No racing of tired horses for the doctor. He uses the telephone. The farmer keeps in touch with the market. He keeps in touch with the entire world more easily than ever before. Telephones on the farm have really proved a blessing.

The Kellogg people have particularized on farm telephones. Their instruments are constituted for the heaviest farm service. Thirty-seven distinct tests are given each instrument before it is declared O.K. No repair bills. Telephone experts assist in planning the lines for farmers.

Those interested would find the Kellogg literature and bulletins splendid and instructive reading. Address the Kellogg Switchboard and Supply Company, Mission and Third Streets, San Francisco, California. [Adv.]

"Key to the Families of North American Insects," by Dr. A. L. Melander, professor of entomology, State College of Washington, Pullman, and Charles T. Brues, assistant professor of economic entomology, Harvard University, is the name of a new publication just off the press. The book is prepared for determining the different insects in such a way that it is valuable and practical for the fruit grower, the inspector and the modern farmer, as well as for the student in classroom work. It is issued with a special glossary defining unusual terms and contains 427 drawings of anatomical details and representative insects, which make the book self-assisting. Anyone who has had elementary training in botany or zoology should be able to determine the name of any insect by the use of pocket lens and this book. To make the book as practicable as possible the important insects are cited as they occur in various families, giving their common and

scientific names. In addition to this, that the reader may connect up the various books and bulletins on insects, many of which do not agree in their nomenclator, a list of synonyms, that is, a list of names, has been bestowed on various groups and species, which has been added. It is important that every fruit grower should have a knowledge of the different insects and be able to recognize them, and in order to obtain the best results he should understand their life history and habits. For determining the different insects this book is very valuable. It is privately printed by the authors and can be obtained from each postpaid for \$1.50.—Adv.]

The Montana State Horticultural Society has issued a very interesting report of the sixteenth annual session of the Montana State Horticultural Society.



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Prevents fruit-laden trees from breaking, holding the limbs up more efficiently and at much less expense than propping. Holds limbs in place, preventing damage and dropping when the wind blows.

Meshes are large enough so fruit can be picked through them—open at bottom so picker can get inside the net, or net can be removed at picking time.

This net of finer mesh will keep the birds from eating the blossoms or fruit in districts which are thus troubled.

For further particulars, descriptive circulars and price lists, write

W. ROSS WINANS, Hood River, Ore.

States government has rendered more efficient service. The service rendered the orange growers of California and the work which he conducted in ascertaining the cause of decay in transit of oranges has saved the orange growers of California hundreds of thousands of dollars. Today Mr. Powell draws the largest salary and handles the greatest number of ears of fruit of any manager of any co-operative fruit growers' association in the United States.

Practically all of the peaches grown in Georgia, Delaware, Connecticut and Michigan and various other peach-producing sections of the Middle West and East are shipped in baskets, which is considerably more economical than shipping in boxes, for the reason that quite an expense is saved in the packing. Some people have suggested that it would be advisable for the Northwest to ship peaches in baskets instead of boxes. It seems the suggestion is well worthy of consideration. Sufficient trial should be made to find out if peaches can be shipped in this way satisfactorily and more economically than in boxes. Information as to the cost can be obtained from the Burlington Basket Company of Burlington, Iowa.

The Washington State Experiment Station at Pullman has just issued a very valuable spray calendar for the year 1915, which can be secured on application.

Grubs! Grubs! Grubs!

Killed by the thousands. We can do it for you. Let us show you how the Ottawa County peach growers are doing it by the use of Kilo-Grub, a poisonous pine tar product, put up in gallon pails ready for use. Apple growers in this locality are using Kilo-Grub to dope over all cuts after trimming instead of paint. Try it.

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Orchard Costs—First, Marketing; Second, the Production

Professor C. I. Lewis, Corvallis, Oregon, before Fruit Growers' Conference, Spokane National Apple Show, 1914

THE problems confronting the fruit-grower can be divided into two natural heads—first, marketing; second, problems of production. Marketing includes standardization, distribution and the utilization of by-products. The following points are included under problems of production: Our aim should be to produce a large crop of high-class fruit at a minimum cost, while at the same time we maintain the vigor of the trees. The production of a large crop of first-class fruit depends upon a happy combination of soil, variety, climate, and personal skill. The cost of production will depend very largely upon two factors, namely, the advantage of location and the business ability of the owner.

To obtain such results the owner must have his work well organized; he must have made a systematic study of details, and must have had a good previous knowledge of costs. In attacking the problem of the production of fruit there are many sides which should be taken into consideration, such as size of unit, economic management and orchard operations. There is undoubtedly a true economic size for an orchard, for each type of fruit. This is very apt to be a one-team unit or combinations of one-team units. That is, an area on which one team and one man can do the greater part of the work, or a combination of such units. In very small acreages, unless one is very careful, the overhead charges become so high as to become almost prohibitive.

Orchards should be well laid out so as to facilitate work and to make an attractive appearance. They should be divided into blocks of not too large area; these blocks may be divided according to age of trees, type of fruit, variety of fruit, soil or any other such factor. The accounts of the costs of each block should be kept separately. In laying out the orchard very careful attention should be given to pollination, so as to enable the grower to get the maximum set of fruit and at the same time care should be taken to maintain the orchard with the greatest economy of management. That is, it would be best to lay it out in solid rows of two to six rows of each variety rather than in a miscellaneous scattering of varieties.

Tillage.—Much money is being lost in tillage. This is due to wrong methods of tillage on the one hand or the employment of wrong tools on the other hand. Much money is lost by those who handle clay soils through neglect to harrow promptly after plowing. When large areas are left unharrowed it materially increases the cost of putting this land into good tilth. Poor tools and insufficient horsepower are the Waterloo of many an orchardist. He has not worked out, for example, the relationship between two, three and four horses on certain tools, neither has he worked out the relationship of

the work the tools will do and the comparative cost of certain tools. This must be done if the cost of tillage is to be kept down.

Inter-Cropping.—We hear a great deal of the possibilities of inter-cropping, and many men are making a great deal of money; others are losing money or breaking even, simply because they have not definitely determined the cost of the production of such inter-crops, or the increased cost of maintenance of the trees where crops are grown among them. The inter-crops in an orchard should, as a rule, be something which should sell at a high price.

Fertilizers.—While we have not been using fertilizers very extensively as yet, much money is being lost by the application of mixed fertilizers. The only way to test out your land is to choose small blocks of trees and apply the separate high-grade fertilizers, such as nitrogen, potash and phosphoric acid, and if you desire, combinations of the two and on one plot, a combination of all three of such elements. In this way, by taking six or seven plots, one can easily determine what plant foods will be of value on your orchard. You cannot determine this by the use of a mixed fertilizer.

Pruning.—The subject of pruning is almost too large to dwell on at this time. The greatest loss, however, I believe, in the cost of production, as far as pruning is concerned, comes from excessive pruning of trees just reaching the bearing age. In addition to this a great loss comes from careless pruning, leaving wounds unprotected, etc.

Spraying.—We have heard a great deal from the entomologists and plant pathologists of the tremendous toll that insects and diseases take from our crops, and undoubtedly their statements are true, although the damages are probably purely estimated. However, while it is true that money is lost by not giving ample protection against diseases and insects, there are a great many men who are losing money in other ways. First, by not knowing what they are spraying for. Second, by spraying the entire orchard where only a few trees need attention. I know one man who sprayed a large young orchard seven times in one year, and yet he had very little in his orchard to spray for. Money is lost by mixing combinations which don't work well together; by discarding well-known sprays for new, untried mixtures. We should be willing to try new sprays which come out, but should do it on a conservative scale. Money is also lost by investing money in outfits that are not suited to the work, and by using excessive power and coarse nozzles when they are not needed. There are certain conditions where coarse nozzles are most effective to use, but there are other conditions where they are not effective and certainly are very wasteful.

Handling the Crop.—Money is lost in handling the crop by not systematizing the work; by not studying the proper location of the packing house, and its best arrangement. The packing house should always be centrally located and should be so planned that the fruit always moves in one direction, after it arrives in the building. Much money is being lost in the Pacific Northwest at the present time by allowing much of the fruit to hang on the trees too long before harvesting, and our horticultural communities as a whole are meeting with great loss because we do not have the proper facilities for storage.

Labor.—Enormous sums are lost by the poor handling of labor. To get the best results the owner or foreman should be a student, one who plans his work carefully, who has planned out the work for each man for the entire day as much as it is feasible to do so. He must make a close study of his actual costs from day to day. Above all he must be a good student of human nature and understand men. He should be of an experimental type of mind, so that he is willing to try out, on a conservative scale, some new methods.

The Star Boarder.—There are too many star boarders in our orchards, trees that are eating their heads off, so to speak. These trees come under several classes: First, trees of very low vitality, that are weak and always will be. Second, the trees of wrong varieties. The competition is going to be so keen that all orchardists must find the varieties that do well under their conditions and grow to the highest degree of perfection. An examination of some of the apples on exhibition at this show demonstrates that if these apples are typical specimens from the communities in which they are grown then there are certain communities which should drop some varieties.

Let us all get together and work hard on this problem of determining the costs, and then strive to reduce them. If we could have saved one cent a box on each box this year on our orchard costs in the Pacific Northwest, we would have a fund of \$90,000 to \$100,000. Such a sum would go a long way toward solving some of the marketing problems of the day, and certainly would prove a magnificent advertising fund for the apple. I am confident that with the hearty co-operation of all we can reduce this loss very materially.

“The conference (International Railway Congress) established beyond question, I think, the supremacy of the American railroad from the standpoint of efficiency.”—Hon. Franklin K. Lane.

The Sprague Canning Company of Chicago issues a very attractive little organ called “Cannery Notes.” This is issued monthly and can be secured by writing for it.

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ADVERTISING RATES ON APPLICATION

Entered as second-class matter December 27, 1906, at the
Postoffice at Hood River, Oregon, under Act
of Congress of March 3, 1879.

The Consumers' Dollar.—The article on this subject by Mr. G. Harold Powell, manager of the California Fruit Growers' Exchange, should be read by every fruitgrower of the Northwest. Mr. Powell is known by the fruitgrowers all over the United States, having at one time been chief executive in the Department of Horticulture, Washington, D. C., United States Government. He is manager of the California Fruit Growers' Exchange, located at Los Angeles, which handles more cars of fruit than any other association. Mr. Powell receives a higher salary than any other man engaged in marketing fruit on a co-operative basis. While the article refers to the consumers' dollar in connection with the orange business, it is valuable for comparison and gives some information that may be utilized to advantage by the fruitgrowers producing every other kind of fruit. In the percentage table as compiled by Mr. Powell the orange grower gets 26 $\frac{7}{10}$ per cent after deducting the cost of picking and hauling to the packing house, which is 10 $\frac{1}{2}$ cents per box. The percentage net to the grower also is made after deducting the cost of packing, which is 32 $\frac{3}{10}$ cents per box. Mr. H. M. Gilbert of North Yakima delivered an address before the Washington State Horticultural Society meeting in North Yakima in January, 1913, which was published in the April edition of "Better Fruit" of that year. It is one of the ablest articles that has ever been written in reference to the "Consumers' Dollar" on deciduous fruits, and is condensed herewith, with the editor's apology for so doing, as lack of space necessitates it: "Mr. Shepard stole most of my thunder yes-

terday in what I consider the most comprehensive paper we have ever had on marketing before the state association as long as I have been connected with it." (Mr. Shepard's address was published in full in the March edition, 1913.) Mr. Gilbert said: "I started two years ago to make a rigid investigation about prices paid by the consumer and prices received by the grower and what the man in between secured. I believe my conclusions are conservative and I think they are reliable as they are the result of about 500 actual investigations made in a large number of markets in the different states. I find that where the consumer paid \$3 per box for apples the grower has been getting 80 cents; where the consumer paid \$2.25 for medium grades the grower received about 60 cents. The following tables illustrate the percentages, etc.:

Retailer sells best grades at.....	\$3.00	
Grower gets .....	.80	26 $\frac{7}{10}$ %
Shipper, association or grower's agent gets .....	.10	3 $\frac{1}{10}$ %
Railroad gets .....	.50	16 $\frac{3}{10}$ %
Brokerage and commissions, receiving end .....	.25	8 $\frac{1}{10}$ %
Retailer gets	1.35	45 %
		100 %

Consumer pays \$3.00, or 375% on what the grower gets; shipper gets 12 $\frac{3}{10}$ %, railroad 62 $\frac{3}{10}$ %, commission 31 $\frac{3}{10}$ %, retailer 375% of price the grower receives.

Retailer sells medium grades at.....	\$2.25	
Grower gets .....	.60	26 $\frac{7}{10}$ %
Shipper, association or grower's agent gets .....	.07	3 $\frac{1}{10}$ %
Railroad gets .....	.43	19 $\frac{1}{10}$ %
Brokerage and commissions, receiving end .....	.25	11 $\frac{1}{10}$ %
Retailer gets .....	.90	40 %
		100 %

Consumer pays \$2.25, or 375% of price the grower gets.

"Everybody knows the grower gets too little and the consumer pays too much; that it costs too much to get fruit from the grower to the consumer, but instead of squarely facing the facts and finding a remedy by mixing brains with our business the grower condemns the local buyers, the commission men, the association or shipping concerns, in fact everybody except himself and the retailer as the big trouble. While the railroads have given good service I believe that the service could be improved, and in my opinion 50 cents per box is too much to pay on peaches to the Middle Western Cities from the Northwest. I believe that the Panama Canal will reduce the freight rate on apples to Atlantic ports to a figure approximately about 25 cents per box." Mr. Gilbert stated: "That while the railroads take 50 cents per box the retailer takes \$1. How can this be remedied? In the first place the retailer must be persuaded to get rid of the idea that Northwestern fruits are a luxury to be sold to the rich by the dozen. For years we have allowed our apples to go to the speculator and the speculator has resold them to other speculators with a profit added, and sometimes as much as seven profits have been made by actual tracing. The retailer has paid an exorbitant price and therefore considers our fruit a luxury. The old days for speculators

are passed. The deal is too big and the quantity and tonnage too great, but with new adjustment will come lower retail prices. The retailer must be persuaded that it is good business to handle a greater number of boxes of apples at a smaller profit and make more money than to handle a few boxes at a higher profit and make less. There is the problem. Upon this problem the retailer must be educated. The retailer controls the situation. The grower cannot sell to the consumer; it is impossible. The grower cannot fight the retailer. What can be done? We must join hands with the retailer; we must study his problems; we must show him our fruit is not a luxury, but of real value as an every-day article of diet. In good-sized cities the retailer is frequently able to purchase in carlots. By so doing he can secure his fruit at much less cost than he can by obtaining it by express in ten-box lots from some large distributing center. Much can be done along this line to increase consumption. The retailer ought to be educated as to what varieties of peaches, pears and apples and other fruits are best to eat in the different months of the year. The retailer is not mean or vicious. He is a man like the rest of us, quick to catch an idea and anxious to be shown. Mr. Shepard in his remarks yesterday said and reiterated, 'There's a remedy.' So say I, 'There's a reason,' and a reason on reason why the retailer charges such large profits. No one can correct his attitude as easily as the grower and his shipping agents. Some of the pleasantest work I have done has been in changing the attitude of reliable retailers and wholesalers. There are thousands of them; get their attitude corrected, treat them right and you will find they are your best business friends."

Again the editor desires to call the attention to the comparison of the percentage of the "Consumers' Dollars" obtained by the orange grower compared with the apple grower. The orange grower's percentage of 26 $\frac{7}{10}$ per cent is after deducting the expenses of picking, packing and hauling; the percentage of the "Consumers' Dollars" on apples, according to Mr. Gilbert's analysis, is 26 $\frac{3}{10}$ per cent without the cost of picking and packing being deducted. In the first instance, where the apples are retailed at \$3 to the consumer, at least 30 cents should be deducted for picking and packing (and they most frequently cost 35 cents) from the consumers' dollar, which would be 10 per cent reduction in the percentage the growers get, reducing his percentage to 16 $\frac{3}{10}$ per cent of the consumers' dollar as compared with 26 $\frac{3}{10}$ per cent received by the orange growers. Why? That is the problem for the apple grower to study and solve. In the second analysis, where the consumer pays \$2.25 and the grower gets 60 cents, or 26 $\frac{3}{10}$ per cent, the price of picking and packing being 30 cents and, as before stated, frequently 35 cents, it would reduce the grower's price per

box net to approximately 30 cents and reduce the percentage received by the grower of the consumers' dollar to 13½ per cent. Again the editor calls the attention of the apple grower, asking the question, Why? The matter needs serious investigation and study in order that the problem may be solved and the apple grower of the Northwest should receive as high a percentage of the consumers' dollar as has been obtained by Mr. G. Harold Powell, manager of the California Fruit Growers' Exchange for the orange growers of the State of California.

Apple Grading.—Grading machines were introduced into the Northwest four years ago when the editor of "Better Fruit" placed on order for the first grading machine that was ever sold in the States of Oregon, Washington, Idaho and Montana. Since that time a number of new grading machines have been manufactured and placed on the market, all meeting with pretty good success and giving pretty good satisfaction. Each year each one is improved. Thirteen different grading machines are being manufactured. The main point to present for the fruit-growers' consideration at this time is: That grading machines, according to the experience of different users and operators, have saved the growers from three to ten cents per box in grading and packing the apple crop. Many of these graders have been found practical for grading pears and even fruit that can be bruised as easily as peaches. In fact it is claimed by some manufacturers that their machines will grade every variety of fruit without bruising. The opinion seems to generally prevail that every fruitgrower who has 2,000 boxes of apples can save enough in one or two years to more than pay the cost of the machine. When the crop is larger he can save the price of the machine and considerably more in one season. While the item of saving, as already suggested, is an important factor during the present time when stringent economy is necessary, another fact well worth the attention of

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the fruitgrower is that with a good grader the fruit can be graded more uniformly to size and the grading, as far as blemishes are concerned, can be done more perfectly for the reason that the man operating the grading machine has his mind concentrated on his work and is therefore in a position to do better work, but it must be remembered, particularly when packers are paid by the box, if the grading is not properly done then the packing will not be up to grade, because the packer who is paid by the box who is anxious to earn money will not take time to sort out

apples that are below the grade. However this statement is just as true if apples are graded by hand as if they are graded by machine. Grading by machine is in no way responsible for apples not being graded according to standard, but poor machine grading is due entirely to the fact that the graders are either careless or the grower is not particular in his requirements.

Markets for Potatoes.—Hon. H. B. Miller, Director of the Department of Commerce and Industrial Survey University of Oregon School of Commerce, has just written a bulletin on "Markets for Potatoes," which is published by the University of Oregon. It is the most complete and thorough research of anything that has been published on the subjects covered in reference to potatoes, containing an immense amount of valuable and interesting information, as well as much statistical matter. The first chapter is a summary of salient features; a table is given showing the number of acres and the number of bushels with the average yield per acre in every foreign country as well as United States; a table showing the acreage, production, prices, exports and imports into United States is complete from 1901 to 1914. Another table shows the acreage yield in bushels and the average per acre for every state in the Union for the years 1912-13. The average price is also shown for ten years, from 1900 to 1909. The average price is also shown for each state from

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The only trap guaranteed to catch small or the large pocket gopher. Being round with thin edges gopher walks into trap before detecting anything in runway. 100 per cent efficient—catches gopher every time. Far safer and surer than poisons or gas. Farmers say it's worth dozen other makes. Price 50c. If your dealer can't supply you, will be sent postpaid upon receipt of 60c; two traps \$1.10; six for \$3.00. Money back if not satisfied.

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1900 to 1909 and the farm price also for the years 1912-13. The next chapter deals with conditions in reference to the potato business on the Pacific Coast, while another shows competition for Oregon potatoes. Another chapter deals with possible markets for Oregon potatoes. In addition to this much interesting matter is contained in chapters on Varieties, the Industrial Use of Potatoes, Potato Starch, Alcohol from Potatoes, Products from Dried Potatoes, Potatoes as a Stock Food, etc.

Fruitgrowers during the months of April and May are kept pretty busy with spring cultivating and early sprayings. During the balance of the summer, while the fruitgrower has plenty to do cultivating, spraying and irrigating, he frequently has some time to spare, and it seems well worth while to suggest that during these odd moments he should begin to think of preparing for harvesting his crop this fall. It is no unusual occurrence for the fruitgrower to drive to town and find that

the dealer is all out of picking buckets or ladders. Every fruitgrower should make up his mind how many new picking receptacles he needs and purchase them early in the season. He should estimate his crop and determine about how many pickers will be required to gather it; repair his ladders that are worth repairing and purchase the necessary number of new ones in advance of the season, otherwise he may be disappointed and be unable to get what he wants and either have to go without or take some ladder or bucket that is unsatisfactory.

1914 Grading.—The complaint from the dealers, and it seems well to include our own salesmen who handle the apple crop, is to the effect that the 1914 grading was not as carefully done as has been done in the past. The fruitgrower has a reputation to sustain. He must sustain that reputation and put up a pack that meets all requirements as to grade if he expects the dealer and the consumer to pay the price. It seems

wise to caution every fruitgrower along this line in advance of the harvesting season, urging him that it is to his interest to see that all kinds of fruits are properly graded and carefully packed, beginning with strawberries, including cherries, apricots, peaches, plums, prunes, pears, apples, etc.

Diversity in Fruit Growing.—The fruitgrower today is becoming more of a diversity farmer. There are many crops that can be grown between the trees, particularly in young orchards, which will bring in some extra money between seasons and pay a good profit. An interesting article on this subject, entitled "Inter-Cropping of Orchards," by Professor Thornber, appears in this edition and should be read by every fruitgrower.

Strawberry growers who want good picking and packing done should look to the comforts of their help, by seeing that they are provided with good camping accommodations in the way of comfortable tents, wood and water, making harvesting season attractive and comfortable.

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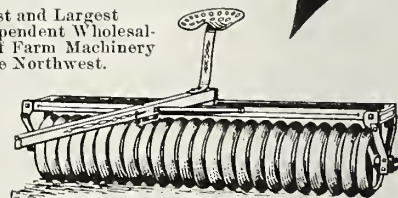
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The Outlook for Prunes

By H. S. Gile, Salem, Oregon

THE subject of this article is not in any sense new, and in approaching it one naturally wonders what new thing can be said. Perhaps a look behind may give us some suggestion as to the possibilities of the future. Oregon prunes, like many other products possessing much merit, have passed through their period of storm and the producers have had their times of trial and tribulation. Their dark days, however, were not of long duration and may be said to have begun and ended between the years 1902 and 1904. The cause may be attributed to over-promotion in the sale of lands and planted young orchards at the very inception of the prune-growing idea in the Northwest, or perhaps to be more correct, we should say under-development of the markets in anticipation of the coming new product. It was not a small task to introduce, or rather to force upon the market, a competitor of the California French prunes, which at that time had just about reached the height of its popularity.

The Oregon prune was not wanted by the wholesale merchants of this country and there was good business reasoning in their objection to placing in their stock another variety of prune entirely different, unknown, and according to their argument of doubtful quality. The result was that for a time when the majority of prune orchards had reached the stage of full bearing that there was overproduction, measured by the demand. In fact there was no demand. The demand had yet to be created. It would be a long and not uninteresting story to recite the experiences through which we passed at about that period, but that is another story. Suffice it to say that the sales of the product at less than cost of production forced matters in two ways: First, it forced some of the most unlikely orchards and their owners out of the business, and, second, the very cheapness of the fruit forced consumption. Then we began to learn some things concerning the necessary appli-

cation of sterilization processes to the fruit in order to properly fit it for keeping. Also by that method we soon found that the fruit was improved in quality so that there was much less danger of the careless cook serving the fruit improperly prepared.

Orchardists have also learned that there were certain sections, certain elevations, certain soils, certain slopes, where the fruit produces most regularly and ripens the best quality of prunes for evaporation, while other districts can produce the same fruit better for fresh shipment. All of these experiences may be had by the amateur who may wish to become a grower of prunes. He can start assured that he will avoid some of the rocks which have caused wrecks in the past. Not only had the home markets to be cultivated, but it soon became apparent that if any large success was to be gained we must get into the large foreign markets, and there again those of us who may be said to have pioneered the marketing of the Northwest prune industry had a still harder struggle, coming as we did in direct contact and opposition with the (then called) Turkish prune and the French prune and carrying the battle very close to the base of their supplies. A foothold was gained first in England and from that it has spread

until practically all of the European countries, in a greater or less extent, have received our fruit, and had it not been for the war, Italy, France and Switzerland would this year have taken considerable shipments of Oregon prunes. Small shipments only have gone to these countries heretofore. I am referring now entirely to the so-called Italian prune.

During the last several seasons the demand may be said to have exceeded the supply and it should be said frankly that horticulturists should not base their calculations upon these extreme values in forming their personal estimate of the outlook for prunes. However, it is not necessary that they should. The truth concerning the net results of the prune product in Oregon, based upon a fair average of several seasons, makes the story quite good enough.

Just a word here concerning Oregon French prunes. They seem to be strong growers and certain producers in any place where the other variety of prune does well, but there are sections in Oregon where the French prune seems to be especially at home and the quality produced is not surpassed by any French prune grown in any country in the wide world. Having recently spent several months in the heart of the pro-

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ducing district in France in the study of prune production, I feel competent to speak upon this matter. The grower should aim to produce good-sized fruit, first by proper selection of stock and later by proper methods of pruning. Such an orchard, especially if carried in connection with an orchard of Oregon prunes, will prove profitable and satisfactory in its results. It is distinctive in quality from any other French prune and decidedly superior.

In turning now to the future, there is visible no cloud of any serious consequence except that caused by the war, both in its present effect and its possible after effect, both of which are worthy of serious thought. While it is true that our own country has enormous consuming power, it is also true that we must have the help of the foreign consumers to absorb the present enormous cured-fruit supply of the Pacific Coast. Without them we shall constantly have the menace of unsteady prices, too low perhaps at times for profit to the producer. We all know

what happened to our markets this season during September and October when the war automatically annulled great numbers of foreign dried-fruit contracts, though England at least is again taking a limited quantity of our fruits. The most serious question is, however, relative to the purchasing power of the masses in England and on the continent after the war is over. This is an unknown condition upon which we can only venture a guess. With cheaper transportation under normal conditions abroad we have every reason to anticipate greatly increased demand, and were it not except for this one very serious condition there could be nothing in the market situation which would not easily justify the demand for doubling as speedily as possible the present prune acreage of the Willamette Valley and in other districts where the best evaporated product is now being made.

This writer more than six years ago advised increased prune planting in more than one public address and at the same time advised against the planting of apples in districts where prunes could be successfully produced. Some may feel that apples, having reached a very low level of value on account of, shall we say, overproduction or under-development of markets, will reduce the demand for prunes and

consequently additional planting will be a mistake. I hardly think so. Except for the limited effort of the Willamette Valley Prune Association, a small co-operative organization in Salem, nothing has been done yet to advertise the excellent food value of Oregon prunes to our own people in the United States. A very small percentage only of the wholesale merchants of the United States carry Oregon prunes as a regular item of stock, and I seriously doubt if 10 per cent of the retail merchants in the United States have ever sold them. One reason for this situation is that we have in the Northwest no other considerable amount of any other variety of cured fruit which we can include with our prunes to make up carloads and not many wholesale merchants,—only the very largest of them,—can afford to purchase Oregon prunes exclusively in carloads of 40,000 pounds. When it was possible to ship 20,000 or 24,000 pounds as a minimum it was not so bad. Fruit-

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APPLE, PEAR AND PEACH BOXES
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men of the Pacific Coast, especially in the Northwest, must strenuously resist in the future any effort on the part of the transportation companies to increase the minimum to any figure above 40,000 pounds.

The discrimination of transportation companies against dried fruits in the rate charged, as compared with canned salmon and some other Coast products, has already cost them the bulk of this traffic, which is now being forced to find its way east by water. Growers should prepare to make some large general effort to advertise their product. This was seriously considered in 1903 by many of the growers in Oregon under the direction of the Willamette Valley Prune Association, but had to be abandoned because at that time it was impossible to secure the necessary funds. You have noticed today the national publicity which is being given through the magazines to raisins, oranges, grapefruit, etc. There can be no doubt that national advertising where there is national distribution is today being handled in a scientific business manner, and that it pays tremendously goes without saying. Can we improve the quality of our product? Most emphatically we can. In fact we must do it, and there are many methods of preparation and packing the fruit for market as yet untried by the Oregon packers.

Great progress has been made, especially in improving packing methods, but I must speak plainly here concerning the greatest evil which the industry has to contend against today. It has been with us from the very beginning. In the early period of the industry there may have been some excuse because people did not then know any better. They had to learn how to properly cure their fruit. It must in fairness be said that the great majority of the prune growers in the Northwest do today exercise their very best knowledge and to place upon the market a well cured, clean, good, wholesome product, but there is another class who not only will not learn but evidently do not want to know. In fact they are too dishonest to turn out an honest product. These men care nothing for the future of the industry or for the troubles of the various men through whose hands their product must pass before it is finally consumed or dumped, mouldy and rotten, into some retail merchant's waste barrel. It affects them not at all to tell them that their fruit will not keep, that it will make enemies forever of perhaps a great many merchants who will innocently get hold of this trash, to say nothing of thousands of consumers who will eventually get the half fermented, mushy stuff upon their tables and forever swear off from eating Oregon prunes.

If this condition continues, what avails it to spend money to advertise our product when a certain percentage of the goods go upon the market annually in this shape? You say, "Don't buy it"; we don't and reliable packers don't, but there is in the packing busi-



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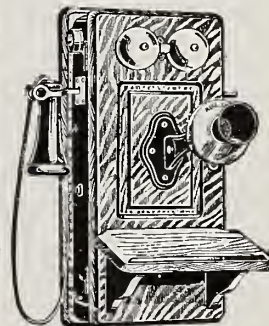
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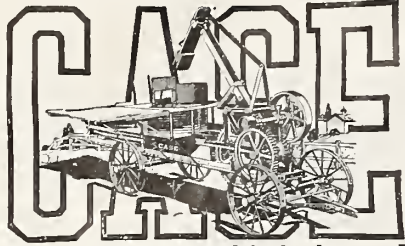
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ness, and perhaps there always will be, a certain element so hungry to do business that they too have lost sight of all the higher principles of business and these unfit prunes are always bought by them. Of course the inevitable end of that packer is failure sooner or later, but by a run of fortunate market conditions he may last through several seasons and during that period can do the industry untold injury. I could point you to any number of wholesale dealers and to the trade in more than one entire city where they have quit buying Oregon prunes for no other reason than that above stated.

It seems to me that the time has come and that there is no other alternative except to compel this small minority to become honest. We must have some sort of legislation which will fix a fair, reasonable standard for Oregon cured fruit, to which both grower and packer shall be compelled to measure up, and with this law there must be provided the necessary machinery to make it decidedly effective. Give us this and I believe the outlook for prune growing in the Northwest is decidedly bright. Without it the majority cannot build up the trade fast enough to overcome the counter effects of the careless, dishonest operator. The outlook for the Oregon prune as a steady, profitable horticultural industry is decidedly bright except for the two exceptions noted above, both of which will eventually be eliminated.

Notice

The American Association of Nurserymen will hold their annual convention at Detroit, Michigan, June 23, 24 and 25. Further information can be obtained by addressing John Hall, secretary, Rochester, New York. The conventions of this association are very instructive and valuable to the fruit growers as well as the nurserymen and all those who can find it convenient to attend this meeting should do so.

Fruit Distributors Elect

Wenatchee, April 20.—The Sub-Centrals of the Wenatchee-North Central Washington Fruit Distributors held their annual meetings. The Cashmere Fruit Distributors elected the following trustees: C. G. Carey, H. E. Tibbetts, J. M. Francisco, Earl Babcock, O. M. Torrence. The Entiat Fruit Distributors elected: L. Auvil, S. J. Santmeyer, T. I. Jones, J. W. Bonar, L. C. Sage. Monitor elected: A. J. Baker, C. C. Moore, C. W. Moore, Walter Richardson, H. J. Mohler.

The Oregon Countrymen, published by the Oregon Agricultural College, Corvallis, is one of the most instructive and attractive magazines issued by any of the agricultural colleges. The cover page for February contains a very attractive cut of the Oregon State building.

The Western Fruit Jobbers' Association of America held its eleventh annual meeting in Los Angeles, February 15-19.

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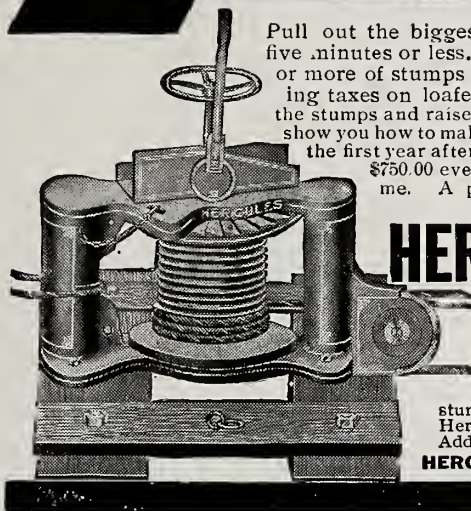
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Pull out the biggest stump in five minutes or less. Pull out an acre or more of stumps a day. Stop paying taxes on loafer land. Clear out the stumps and raise money crops. Let me show you how to make \$1280.00 on 40 acres the first year after stumps are out--and \$750.00 every year after. Write me. A postal will do. The

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Inter-Cropping Orchards

By W. S. Thornber, Consulting Orchardist, Lewiston, Idaho.

THE orchard industry of the Northwest, like all other industries of its kind, is passing through a series of periods all of which will eventually contribute to the permanent good of the fruitman. Those best posted upon the subject and most vitally interested

have watched with interest "The One Spray for Codling Moth," "The Lime-Sulphur for Scale," "The Open-Vase System of Pruning," "The Absolutely Clean Cultivation Advocate," "The Grass-Mulch Orchardist," and now comes the "Orchard Inter-Cropper" as the fulfillment of the law for all evils. Each of these phases has had its part in the great industry and each has left a mark for good; however not one of them has been able to succeed under all conditions. Nor must we expect the last, if not the greatest, to do all that is expected of it. High-priced land, expensive water rights, costly orchard tillage and the long wait between the planting of an orchard and the realization of returns, coupled with the low prices received for fruit during the past four or five years, have materially fostered the seeking of returns from the orchard land of the Northwest during the development period of the orchard and also during seasons of low prices or small crops.

As I see orchard inter-cropping, I see a solution for one of the most serious phases of the industry, and that is a method whereby the cost of production and orchard management might be reduced to a minimum. There is absolutely no reason why in any of our best orchard districts that, after the land and water right have been purchased, the orchard itself should not be made to pay all operating expenses, taxes and annual water dues by some means of inter-cropping, and in the case of small areas like ten-acre tracts almost if not completely support the

orchardist and his family during the development period. In the case of the bearing orchard, inter-crops should be made to so reduce the operating expenses that the fruit sold as extra fancy grade should always mean net profit, and never have to be used to pay necessary expenses. Management of this kind will make successful orcharding. Various avenues have been sought for

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Another record where 70 feet was drilled on 2 1/2 gal. distillate at 9c per gal. One man can operate. Electrically equipped for running nights. Fishing job. Engine ignition. Catalogue W.S. REIERSON MACHINERY CO., Manfrs., Portland, Ore.

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White River Flour

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"PERFECT" Cement Coated Nails

OUR PRODUCTS ARE OF SUPERIOR QUALITY
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PRICE and QUALITY always right.

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Monadnock Building, SAN FRANCISCO, CALIFORNIA
PACIFIC COAST SALES MANAGERS

No Matter What Crop You Grow, Your Soil Must be Right Always

The universal soil need is Phosphorous.

The most economical and logical source of Phosphorous is

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profitable returns; some men have found profit in doing one thing while others have found it in doing another. Yet as a whole, in the long run, the most profitable returns have come from a combination of practices, utilizing to the best advantage the unused space among the trees and the leisure moments of the orchardist. This has kept him busy, which is a good thing to prevent discouragement, and at the same time protected the orchard from neglect.

The best combination has not so much depended upon soil, climate or water, but rather upon the man, and particularly upon brain activity. The marketing of inter-crops in crude form has in most cases proven unsatisfactory. This is typically illustrated in the case of the man who could grow one hundred and fifty tons of carrots in a five-acre orchard but was able to market only one ton at eight dollars per ton in his locality, and later found a splendid market for nice, fat hogs he produced by feeding carrots with an additional small amount of shorts. Combinations of live stock with alfalfa, clover, vetch, wheat hay, root crops and corn have generally given very good results. In most cases the results have come in a twofold nature; first, by improving the soil by the addition of manure and, second, through financial returns. It is unfortunate, however, that many growers have lost sight of the fact that the soil must be constantly improved before they can measure the value of their success.

The practice of inter-cropping, like all good things, borders on the danger line of injury to the permanent orchard unless definite precautions are intelligently and honestly observed. The greatest injury in most cases comes almost exclusively from lack of sufficient moisture for the trees. This is emphatically true with certain forage and grain crops, but rarely true with cultivated crops. Ordinarily the soil moisture and cultivation that will produce a good crop of medium-height field corn will produce good apple trees. In some sections it is necessary to increase the moisture factor late in the summer when the trees become old enough to bear, as the corn tends to leave the soil rather dry for the best development of fruit buds. Another factor in inter-cropping orchards is the certainty of market for the products. Unless an orchardist is favorably located, he should not attempt perishable berries and soft vegetables. In fact no crop should be attempted without first considering the possibilities of the markets for the same. It is generally a very poor policy for an orchardist to attempt to dispose of his product by peddling from door to door, as his time is usually more valuable to him at home in the orchard than on the street.

For convenience of study I desire to classify crops suitable for inter-cropping work into several groups: Crops that may be grown with profit in the young orchard. A. Perennial crops: 1, alfalfa in strips for seed or forage.

2, red clover in strips for seed or forage. 3, white clover in strips for seed. 4, asparagus. 5, rhubarb. 6, nursery stock. 7, small fruits, strawberry, loganberry-dewberry, raspberry and blackberry, currants and gooseberries, grapes. B. Annual crops: 1, vegetables, potatoes and tomatoes, cantaloupes and watermelons, cabbage and cauliflower, onions and celery, pumpkins and squash, sugar beets and mangels, carrots and sweet corn, garden peas and beans for seed, lettuce and spinach, vegetable seed crops. 2, field crops, corn and fetereta, wheat hay, oat hay, pea and oat hay, barley, oats and peas for feed for hogs, field peas for seed. Crops that may be grown with profit in the bearing orchard: 1, alfalfa for hay or hog pasture. 2, clover for hay or hog pasture. 3, rape for hog pasture. 4, vetch for hog pasture or seed. The long list of adaptable inter-crops makes it possible for the orchardist to choose very much to his liking and at the same time produce a profitable crop. The greatest care must be exercised in getting one suitable to the climate, markets, needs of the soil and adaptability of the orchardist. It is not a wise policy to grow a great many kinds of inter-crops nor to confine yourself to a single crop.

Inter-Crop Combinations

If the orchardist can care for a few hogs or dairy cows then alfalfa or clover, with roots or mangels and corn, will make an extra fine combination. Where small fruits are used it is far better to have a succession of berries to harvest than a lot of one kind for a short period of time. Loganberries and dewberries, in conjunction with red raspberries and strawberries, make an excellent small-fruit combination. Small fruits and root crops do not work well together where the root crop needs must be hand thinned. Where large orchard areas must be handled and Canadian peas, oats, wheat, alfalfa and corn can be grown they make an excellent farm combination. The land for wheat can be prepared in the fall and the wheat sown. Early in the spring the peas and oats and peas for seed can be sown. The alfalfa must then be disked and the corn land prepared and planted. After the corn is planted, the wheat, pea or oat land and pea land, in addition to the corn land, will require frequent harrowings until time to cultivate corn. After corn cultivation, under normal conditions the harvest of the wheat hay, pea and oat hay and peas for seed will follow in rapid succession, thus making it possible with a minimum number of teams to handle a comparatively large orchard area.

Perennial Inter-Crops

Alfalfa and Clover.—Alfalfa is one of the most practical and profitable orchard inter-crops grown in irrigated sections or where an abundance of moisture is assured. It should be used only in strips in young orchards and never planted closer than four feet from the tree row. This allows room for tree-row cultivation and under favorable conditions will not injure the

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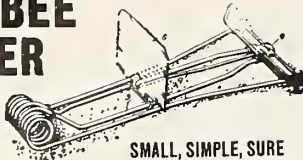
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WHEN WRITING ADVERTISERS MENTION BETTER FRUIT

trees. It is possible to annually produce from four to six tons of hay per acre from this crop seeded in this manner and at the same time improve the physical as well as the chemical condition of the soil. Alfalfa is a deep rooter and requires less water than clover, which is comparatively a shallow-rooted plant. In some districts both red and white clover grown for seed purposes have proven to be profitable orchard crops. This is not generally the case, however.

Asparagus and Rhubarb.—In a few very favorable districts asparagus and rhubarb have been found to be extremely profitable inter-crops. These crops are not generally profitable in districts where the springs are unusually late, should the orchardist expect good prices in local markets where transportation facilities are poor. They are not heavy feeders, but respond to rich soil and lots of manure and should not be used on poor soils.

Nursery Stock.—The growing of nursery stock as an orchard inter-crop has been a favorite practice among fruit-growers for generations, and while it has not been as profitable during the past five years as formerly there is good money in it for the man who knows how to handle special trees and create a demand for them. It has some serious disadvantages, however, that must be considered. The principal one is the introduction of undesirable pests in the orchard; woolly aphis, San Jose scale, root gall and blight are almost sure to follow in the trail of the nursery, all of which must be constantly guarded against.

Small Fruit.—A general variety of small fruit intelligently planted as an inter-crop has proven to be one of the most successful crops, financially, grown by many of our best orchardists. While small fruit requires lots of labor, it also gives profitable employment during the greater part of the year. It has been an interesting fact that in some of our large fruit districts where tree fruit has been the lowest in price, bush or small fruit has been the highest in price.

Strawberries, dewberries and red raspberries have generally given the best financial returns, while gooseberries, red currants and grapes have as a rule given the most unsatisfactory returns. Loganberries have not been thoroughly tested out in most districts, but where they are being grown are proving to be winners, not only as fresh fruit but also as a substitute for fruit-juice products.

The skillful orchardist will have no difficulty in systematically balancing his small-fruit plantings in such a manner as to make it possible, with a limited number of helpers, to care for and harvest a comparatively large area of small fruit, and after all this is one of the important factors of inter-cropping.

Annual Inter-Crops

Annual inter-crops have as a rule been more generally used than perennial crops, for the reason that they are less apt to injure the trees and the re-



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turns have come earlier. Vegetables have been one of the favorite crops, and particularly has this been true of potatoes and cantaloupes.

Vegetable inter-cropping has not as rule, when practiced in a large way, been as profitable as when confined to small units. The principal reason for this has been the inability of the orchardist to profitably market his product. Thousands of growers have found no difficulty in producing tons of vegetables, but very few of them are able to market more than a tenth part of what they grow. This problem has become so serious in many places that the vegetable growers find it necessary now to confine their efforts to the production of crops that have a value as stock food when they are unable to market them as fresh vegetables. Splendid examples of these crops are potatoes, pumpkins, squash, carrots, corn and peas.

Potatoes and Tomatoes.—These are excellent inter-crops when intelligently handled, as they insure the orchard of good cultivation and proper care. Growers who wish to grow the potato as a general crop should plan on doing so for a period of years, since the prices for this crop are very variable and it is not considered a safe crop for a single year. In many districts the tomato has proven to be a profitable crop, and particularly so where there is a cannery or extended fresh-fruit market.

Root Crops.—Carrots are unquestionably the most safe and profitable root crop to grow among trees where the orchardist can feed them to stock. Thirty to forty tons per acre are not uncommon yields, and with a feeding value of from six to seven dollars per ton the profitableness of this crop is easily apparent. They are not hard on the soil and orchards inter-cropped with them have done remarkably well. Sugar beets and mangels, while good feed, are not as popular as carrots with most growers. This is partially due to the fact that they require more careful thinning and are sometimes troubled with aphids.

Lettuce.—The lettuce crop is a special crop requiring more patience and skill to successfully produce than the ordinary crop, and yet to a few growers favorably located and gifted with the ability to market a special crop it has proven a wonder. I have known several successful lettuce growers to produce two good crops of fine head lettuce a year on their land and make enough from the sales of one crop to pay for their land twice over. These are exceptional cases, however, and should not be taken as the average.

Corn.—Where corn can be successfully grown it is one of the favorite crops of most men, because it represents to them an easy crop to grow and one that, while not as profitable as some crops, always represents a fair income. Tall-growing field corn should not be planted among young trees, as there is danger of it shading the trees and preventing fruit-bud development. There are several semi-dwarf varieties

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that will give good returns if properly handled. In addition to being a nice crop to grow, corn is one of the safest crops grown among trees, and while it does take out some plant food it makes its heaviest demand upon plant food at a season of the year when the tree growth is or should be slow, and retarding at this time is more apt to be beneficial than harmful. It also has the advantage of shading the ground during the hottest part of the season and thus to a marked degree prevent the destruction of the humus.

Pea and Oat Hay.—Peas and oats or barley or wheat are favorite orchard inter-crops when carefully handled. The peas are especially valuable to the soil, as they improve it faster than any other crop the orchardist can grow annually and are good among young trees because they grow during the early spring months and can be harvested in time to permit the growing of a cover crop during the latter part of the season. No orchardist should attempt to grow hay, no matter what kind, among young trees without being sure of plenty of water to replace what the crop consumes, nor should this crop be grown closer than four feet from the trees.

In order to balance the effects of the grain crop, the seed for the hay crop of an orchard should contain at least 50 per cent of one of the nitrogen-gathering plants. Peas and vetch have been found very profitable in this respect for this purpose.

Inter-Cropping the Bearing Orchard

The inter-cropping of bearing orchards represent another very important phase of fruit-growing work, and while the number of profitable crops are limited to a few, yet these may be made so profitable and important that the inter-crop and its by-products will carry all operating expenses in the management of an orchard. This cannot be done, however, unless the inter-crop is converted, with the waste fruit, into a substantial by-product. The more common way to do this is by means of hogs. Hogs as a side line in orchard work should never be overlooked by either the small or large grower. One has no fruit he can afford to lose, the other has so much fruit he cannot afford to market it all.

Alfalfa and clover are easiest the best crops to grow among bearing trees where water is abundant and cultivation can be more or less abandoned, while rape and vetch represent the most profitable crops to grow where cultivation is not to be entirely given over to the mulch system of orchard work.

Just how these feeds can best be converted into pork depends very largely upon circumstances. The most economical plan is to pasture them out with small-sized hogs, but where this is not feasible then it becomes necessary to practice the soiling system of feeding and feed from racks. The pasturing plan gives the hogs a chance to consume all wormy and cull fruit in the orchard, the only place it can be

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disposed of to advantage, and at the same time compel the hog to gather his own feed, another item of importance. Inter-cropping as a whole represents a phase of orchard work avoided by some growers, and to some this is a wise precaution, while to others it means a regular income.

Humor and Common Sense

By A. N. Banks, the sage of Manson,
Chelan County, Washington

IT seems like we are required to follow the admonition of the Hon. Champ. Clarke, "Toot your own horn, lest it be not tooted," frequently of late. Some of the little gulches up river, above us, actually think that they can grow stuff, like apples, taters, punkins, and sich like, and have cast a defie, at us, to meet them at the Fair Hesperides at Wenatchee next fall, and I tell you these things worry us a heap, 'cause it will put us to our nittin', for they will be there "loaded for bear," so you see, we must be up and a-doin'. As you know, the Lake Chelan country made a very good effort at the last Fair Hesperides, in fact we carried off enough Blue Ribbons to make us bow legged to pack 'em home, and now, them Methow fellers have called for help, "and we got to go and do it all over again." We will have to take a little better care of our green stuff this summer and save it all, as we are going to need it.

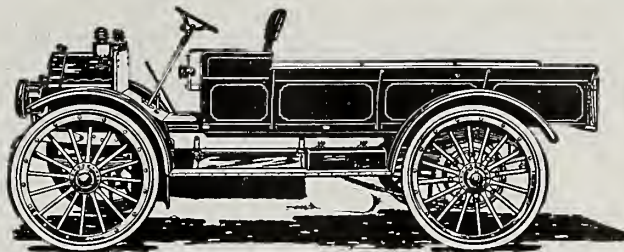
Last spring we lost our best specimen of squash. The vine was growing out behind the barn and the squash had got to be some size when the boy, who does the milkin', went out one morning to drive in the cow, and as he supposed he saw her lying down in the squash patch, so he threwed a small rock at her to make her git up and broke the stem off the squash; on further looking he found the cow in the barn. But we will be a little more careful this season.

Now we may be somewhat like the Irishman who made a list of all the men in his ward he could whip. Murphy called on him one day and says he, "I understand you have me noime on yer list?" "I have," says Pat, "what of it?" "Will you can't do it," says Murphy. "Well thin," says Pat, "I'll take it off."

Now if we done said anything that don't quite suit, why just let the folks come around after the mettin' and opologise, and we will forgive 'em.

Say, Mr. Better Fruit, after the State Meetin' of the Horticultural Society, I seen what a snap them sellin' fellers had, so I just dropped a line to a few of my friends, back east, to come on out here quick, as the pickin' was offul good. The people out here will raise a good crop of fine apples, pick 'em, wrap 'em, and box 'em, and haul 'em down to you at the dapot, and turn 'em over to you; all they ask you to do is to sell 'em for all you can get, and give 'em what you don't want to keep (she sure is easy). Some folks have made \$500,000 in eight (8) years at the business; it sure pays.

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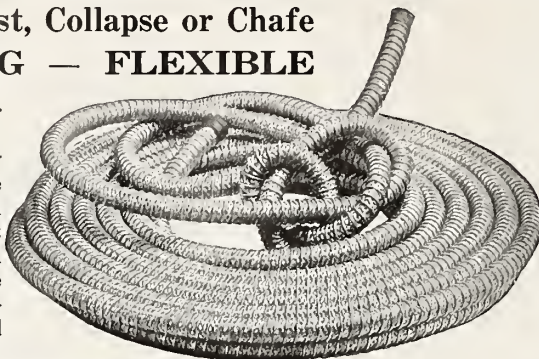
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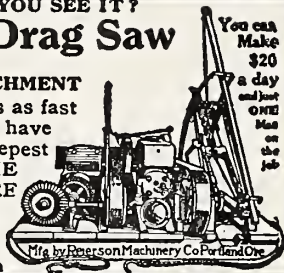
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will cut a 5 foot log in 5 minutes, and small logs as fast with buzz-saw. It will pay your neighbors to have you cut their wood. Will pull itself over the steepest hills and roughest ground. IT ANSWERS THE QUESTION—HOW CAN I MAKE MORE MONEY ON THE FARM? You want to know more about it. Send for Catalog KW 4. WRITE TODAY.

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Sole Manufacturers Portland, Oregon



May 15 they Commence The Eastbound Summer Tourist Excursion Fares

and daily thereafter all summer

Low Rates. Stopovers. Long Limit.

(Account General Assembly Presbyterian Church,
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Two Through Trains Daily

To Minneapolis, St. Paul, Chicago.
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Say, we think it is pretty near time for us apple fellers to do like (business) is going to do, that is investigate the government to find out where the money goes. O it is up to the growers to investigate, what they are doing about the selling part of their business, and it sure needs it. Now we are of a rather "optimistical" nature at best, so after the State Meetin' with the great flow of "wit and other things," we come home feeling purty good. That night we dreamed of all the things we had heard talked about.

The first thing we saw was the returns coming in for our apples. Round silver dollars, with feet and wings, all in Indian file, one after the other, thousands of them, coming right up the middle of the road; the trains on our Electric Railroad, that we are going to build, had sidetracked to let 'em go by. At the crossing of the railroad with our main street, that we have "mapped" out, was a great herd of Holstein cows, that we are "going" to "buy" to get cream to run the "Creamery," from the front door of which building is where I first saw the dollars coming home, so I just rushed out and threw open the doors of the "vault" in the "Bank building," that we are going to build this "summer," and the dollars commenced walking in and stacking themselves up until they filled it full and running over, so we had to commence loaning them out at 12% interest, or goodness knows what we would have done with 'em. Now sir, we was in purty good shape financially, if I hadn't woke up.

Now the "tales" that have been told to them eastern fellers about the profits in apple growin' in this country is all right, at \$2.00 a box, but right now, that talk reminds me a feller I had out here in the greasewood, on a hill overlooking the townsite. I described to him how it would look when the greasewood was removed, and all the land planted in apple trees, and the beautiful town that would nestle at our feet, and how busy we would be loadin' apples on the cars of the electric railroad we was going to build, in fact we done our best to make him see the mind "picture" we was a "paintin'" for him, but we done it like we do most things, over done it, as all at once he grabbed his hat off and tore down the hill as fast as he could run. When I hollered and asked him where he was goin', "Why," he says, "I'm running to catch that train you was tellin' me about."

In the present fix that the apple fellers is in, if you get one of them eastern fellers out here, that has got any money about his clothes, my advice is to hog tie him and take it away from him, and then give him a deed to an orchard, 'cause if they don't straighten up things, that's about the only way you will ever get it.

I could give you my plan of growin' an orchard that might interest some folks. This is the way I do it. First place, take off all the brush and trash; don't take off the rocks, as they fertilize

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WINDOW TRIM

Buy from Factory and Save Money

We operate our own factory and sell direct to the consumer, saving you the retailer's profit. We make prompt shipment anywhere. Quality guaranteed.

Window trim, like drawing 80c
Inside door trim 60c

Cottage front windows \$2.50
5-cross-panel doors, 15 sizes 1.10
Cottage front doors... 2.45
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Craftsman doors 1.50
Window screens 80c up
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We save you money on Builders' Supplies.

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POWER WASHER

WOMAN'S FRIEND



A REAL POWER WASHER

Round rubber rubs the clothes, turns them over and over and forces the hot, soapy water through them. Washes tub full perfectly clean in 5 minutes. No wringers to shift. Nothing to get out of order. Special low price to introduce. Catalogue Free.

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Harvey Bolster Springs

make any wagon a spring wagon. Prevent damage to eggs, fruit, etc., on road to market. Soon save cost—produce brings more—wagon lasts longer.


MADE LIKE FINEST AUTO SPRINGS

Very resilient and durable. The standard springs of America since 1889, 40 sizes—fit any wagon—sustain load up to 5 tons. If not at dealer's, write us. Catalog and list of proof free.

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BURLINGTON, IOWA

Ask for Catalogue No. 5

the ground (when they rot) unless it is all rocks, and then you had better take up some other place, then burn the brush and trash, plow the land, that is, git one your neighbors to plow it and promise to pick apples for him when his trees come into bearing, in pay for the plowing. Now git some of them nursery fellers to furnish trees to plant it, telling him you want to act as his agent and sell trees for him, and this orchard is to be the show place so people can see how his trees grow; you can do this if you talk right to him. Of course he has got lots of these show orchards, but "one more" won't hurt him. Now if you live in a good neighborhood, and you should be feeling rather poorly, your neighbors will irrigate your trees and maybe cultivate them for you. This, of course, depends on how much you complain, and the pains you have at that time. Now you can repeat this for three (3) or four (4) years, varying a little each time from the original, until your trees come into bearing, when you have a good crop in sight, you can get boxes from the mill, and paper from the distributing company, who is going to sell them; you can also get them picked, and packed, agreeing to pay for the work when the "distributors" sell your "crop" (ain't it easy?).

Now after living here, near this beautiful lake, where the soil is rich, and you can grow almost anything you want to, and where the apples get so red, we sure ought to be satisfied. But as spring approaches, we still have that yearning for sulphur and molasses to keep the biles from coming out. By Gum!!! I would trade a thousand acres of wild turkeys in Arkansas for my filling of sassafras tea once more.

Well this leaves us all well and hoping for the best. If you ever come out our way, drop in and see us; our lathstring hangs out.

[The foregoing will show to our readers, in a small way, what created so many hearty laughs at the recent State Horticultural meeting at Wenatchee, Washington.—Editor.]

The Brood Sow

Pork producers are in a liquidating humor and are ready to respond to advances in price. The hog market still continues at a low ebb and the situation is aggravated by the top-heavy grain market. Professor Wm. Hislop, Animal Husbandman of the State Experiment Station, states that there is no need to be panicky and to sell when the market is in a semi-demoralized condition. To the world cataclysm now occurring in Europe may be attributed the sharp decline in hog stocks since October, 1914. Feast always follows famine, so it behooves those forward-looking hog growers, who have retained their breeding stock, to give them the best possible care, in order that future production may not be so restricted as it would seem at this time. The essentials of brood sow management may be brief-

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disk harrows make it so easy to do good disk- ing that there is really no excuse for doing any other kind — and there's a style and size for every farmer. Ask your dealer to show you CUTAWAY (CLARK) disk harrows and plows. If he does not sell them, write to us. We ship direct where we have no agent.

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Maker of the original CLARK disk harrows and plows
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GALLIGAN BROS.
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To retail Rawleigh Products, town and country. Some good old vacant territories. Largest and best line. One of the oldest and largest companies in the world. Six factories and branches. All products supplied from new Pacific Coast Branch. Quick Service. Low Freight. We want only industrious men capable of earning \$100 and up per month and expenses. Must have means for starting expenses and furnish Contract signed by 2 responsible men. Address W. T. Rawleigh Company, Oakland, Cal., giving age, occupation and references.



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LARGE MANDY C&S BUCKET SMALL CAN

WHITTIER COBURN CO. S.F. SOLE MFRS.

YOU WANT THE BEST SPRAYER



You want to save time, temper, trouble and trees. You want to raise fruit that brings the highest prices. You want to know all about our sprayer before you buy. There is more you ought to know. Do You Want To Know The Price?

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the Standard Oil for Motor Cars



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ly summarized: (1) Provide suitable food, but do not over-feed; (2) emphasize the protein and ash constituents of the ration; (3) keep the sow growing thrifty, but do not fatten; (4) devise schemes to induce exercise; (5) provide warm, dry, well bedded, well ventilated and sun-lit quarters; (6) avoid constipation by natural feeding methods, but resort to emergency remedies if necessary; (7) kill off lice with crude oil, and drive out worms with santolin and calomel; (8) practice gentleness at all times. Hog men cannot afford to neglect any of these cardinal points when the cost of production is so high. Within the next seven to nine weeks most of the brood sows and gilts will farrow. Our investigations tell us that 90 per cent of the dry matter in the unborn young of the sow and gilt is deposited in utero during the last sixty days of pregnancy. This being so it is wise to provide for the needs of the gilts and sows within this time by increasing their daily wintering rations from 50 to 75 per cent.

Rations for Sows and Gilts Before Farrowing Time.—(1) Barley meal, 75 lbs.; chopped alfalfa hay, 15 lbs.; tankage, 10 lbs.; rutabagas or carrots. (2) Ground oats, 45 lbs.; barley meal, 45 lbs.; tankage, 10 lbs.; alfalfa hay in racks; rutabagas or carrots. (3) Ground oats, 50 lbs.; middlings, 50 lbs.; alfalfa hay or clover hay. In the farrowing pen there should be a rail set eight inches from the floor and six inches to eight inches from the wall, to prevent the sow from crushing her pigs. Provide just a small amount of bedding for the sow to make her nest. For a few hours after farrowing the sow needs no feed other than water which has been sufficiently warmed to remove the chill. After 18 to 24 hours she should have a warm feed of this shorts slop. After that time the feed should be gradually increased until she is receiving all she requires, but no more. Insist upon exercise.

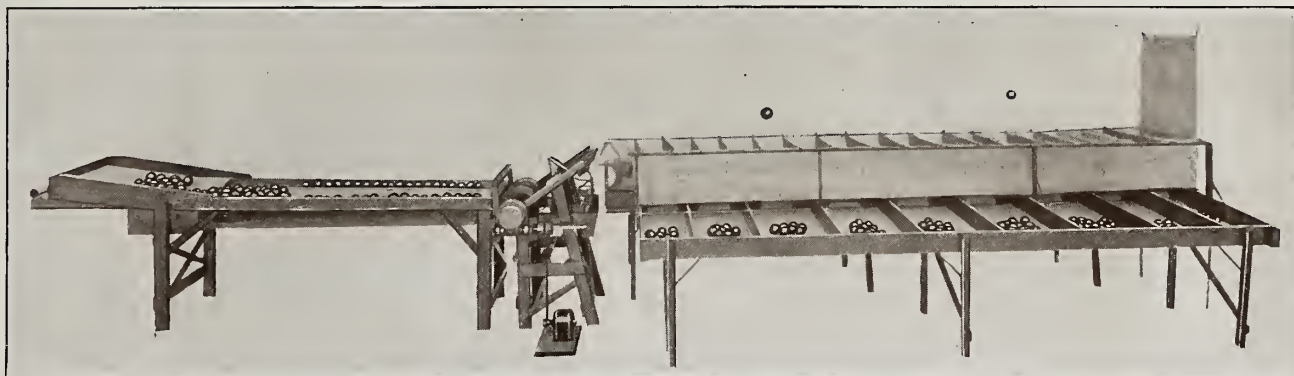
Rations for Sows With Sucking Pigs.—(1) Barley, 30 lbs.; oats, 30 lbs.; middlings, 20 lbs.; bran, 12 lbs.; tankage, 8 lbs. (2) Barley, 50 lbs.; shorts, 20 lbs.; bran, 15 lbs.; oil meal, 10 lbs.; tankage, 5 lbs. (3) Ground oats, 50 lbs.; middlings, 50 lbs.; skim milk. Provide early pasture for the sows and their young. Winter rye and rape are as good as alfalfa, and are ready when most required.

Mr. W. H. Paulhamus, manager, and chairman of the executive committee of the fruit growers' organization of Oregon, Washington, Idaho and Montana for controlling the marketing concerns, is manager of the Puyallup Fruit Growers' Association. His value to the Puyallup association is considered so great that they have insured his life for \$100,000, payable to the association, on which the association pays a premium of \$1,199.75 annually. Twenty-five thousand dollars of this policy is on his life and \$75,000 is accident insurance.

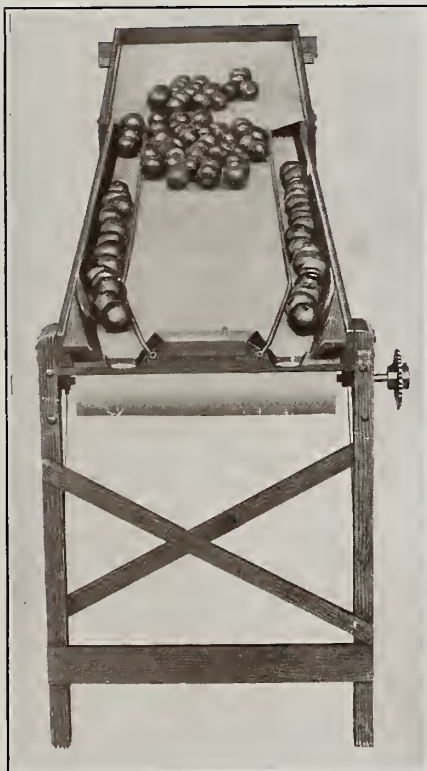
THE TWO-CUP PRICE FRUIT SIZER

Reduces your packing and grading \$45.00 to \$65.00 on every \$100.00

This machine handles two grades; we have one-grade and three-grade sizers also, capacities ranging from 350 boxes per day for the one-grade to 1,800 boxes for the three-grade. Handles any shape of apple, peach or pear, for it does it by weighing, like a pair of scales.



OUR MOTTO—To simplify and reduce the cost of packing fruit, so that even a child could do it and obtain the perfect pack.



Two-Grade Sorting Table

This machine will be demonstrated every day except Sundays during the year at the Panama-Pacific International Exposition in the Palace of Horticulture, by our California State Agent.

Our grading table that revolutionizes the grading question. Notice the moving endless belt that carries the fruit past the sorters. The grades are rolled over the rods—Extra Fancy on the right, Fancy on the left. There is a clutch attachment that stops and starts the belt by simply leaning the body against a lever. This arrangement permits more time for grading in the case of a bad lot of fruit. Grading has been done on this table for $\frac{1}{2}$ cent per box. We say you can do it for 2 cents, at the most. **USERS HAVE GRADED AND PACKED FOR $4\frac{1}{2}$ CENTS PER BOX** on our three-grade sizer. A child can pack after this machine.

Non-Bruising Qualities

During a two weeks' demonstration, we put two dozen eggs through the sizer from 800 to 1,000 times, never cracking a shell.

DEEDS speak louder than words. Read what users say, then write us for more information and what other users think.

We have five 2-cup machines and operated them on peaches all last summer, running 77,200 boxes through to our entire satisfaction, saving by their use one cent per box or \$772.00. Our sorters graded 500 boxes per day per man; under the old method 150 to 250 boxes was considered good. This is the old and the new way of handling apples:

OLD WAY	
Sizing 1,300 boxes apples at 3 cents.....	\$39.00
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\$94.00	
NEW WAY	
Six sorters and feeders at \$2.75.....	\$13.50
Packing 1,300 boxes at $3\frac{1}{2}$ cents.....	\$45.50
\$59.00	

a saving of \$35.00 per day; in a 40 days' run this would be \$1,400.00, plus the saving on peaches of \$772.00, makes a total of nearly \$2,200.00. The most delicate apple can be run through. It will increase the market value of fruit and effect great saving.

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By F. E. Thompson,
North Yakima, Washington.

By the use of the Price Fruit Sizer and Grader we were enabled to grade and pack our last season's tonnage of 70,000 boxes at a combined expense of 6 $\frac{1}{2}$ cents per box; a saving of 3 $\frac{1}{2}$ cents per box over the old methods. We consider it the best thing of its kind

on the market, the fruit being accurately sized and delivered to the packers' bins without bruise or injury.

You may feel free to refer any prospective customer to us.

YAKIMA FRUIT GROWERS' EXCHANGE,
C. A. Alexander, Manager,
North Yakima, Washington.

After having used the Price Fruit Sizer on apples, pears and peaches for two years, I am more fully persuaded of the merit, and especially the matter of economy, in the use of your machine.

Anyone having 2,000 boxes of fruit cannot afford to pack by the old methods. I estimated by an account of cost, a saving of 45% in favor of the machine. All my labels and brands state that they were sized by your machine and my product has an increased value thereby. We recommend it.

J. E. SHANNON & SONS,
North Yakima, Washington.

The Price Fruit Sizer installed in my packing house has proven satisfactory to a degree that it has met every claim you made for it when sold to me. It handles all varieties and with no damage to the fruit, certainly less than when I was grading by hand. I am grading and sizing for 1 $\frac{1}{4}$ cents and packing for 4 cents. The machine is so satisfactory that I would not care to operate without it.

DR. J. S. KLOBER,
Selah, Washington.

We could go on giving you hundreds of such testimonials. Write for further particulars.

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